

THE LARYNGOSCOPE

A MONTHLY JOURNAL
DEVOTED TO DISEASES OF THE
NOSE - THROAT - EAR

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THE LARYNGOSCOPE.

VOL. II.

ST. LOUIS, MO., JUNE, 1897.

No. 6.

ORIGINAL COMMUNICATIONS.

ADENOID VEGETATIONS.*

BY ELLET ORRIN SISSON, M.D.

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College of Physicians and Surgeons, Keokuk, Iowa.

Perhaps no one subject has received more attention at the hands of the rhino-laryngologist within the last few years than hypertrophies of the pharyngeal tonsil, or, as they are commonly called, adenoid vegetations. Although, according to literary researches, hypertrophies of the pharyngeal space have been known to exist since the time of William Hunter, it was left for that accomplished specialist, Meyer of Copenhagen, to demonstrate the frequency and clinical importance of these hypertrophies of Luschka's tonsil. There are several reasons why such an interest should be manifested; but there are three principal ones, the three that exist in connection with many other pathological conditions, which go to make the study of them interesting, and our efforts for their relief fascinating and satisfactory. They are, viz.: first, the common occurrence of the condition; second, the great extent of the pathological influence exerted by it; and third, the realization of the fact that there exists a plan of relief, which if followed out is bound to be productive of good results. Before passing to a

*Read before the second annual meeting of the Western Ophthalmological, Otological, Laryngological, and Rhinological Association, St. Louis, Mo., April 1897.

consideration of the subject proper, I will state that it is not my intention to dwell at length upon the measures adopted for the cure of such conditions, although, as previously stated, they are well nigh perfect, and a complete resumé would be interesting; but I would rather call your attention to the etiology, pathology, and complications accompanying, or resulting from, this now easily recognized and important pathological condition.

ETIOLOGY.

Sajous says: That "the origin is probably traceable in all cases to a catarrhal state of the naso-pharynx, the causes of the latter being therefore the primary etiological factors." He does not state what these primary etiological factors are, but the reader is left to infer that they are the ones usually catalogued. Repeated attacks of acute postero-nasal pharyngitis, occurring independently or simultaneously with acute inflammatory affections of the anterior nasal cavities, the exanthemata and a diathesis. From an embryological standpoint, the rhino-pharyngeal tonsil is the earliest to appear, the palatal next, and the lingual the last of all. In like order to these, undergo atrophy, but sometimes they persist later than the time specified, and then they interfere with the actions of the nose, throat, or ear. Their persistence or refusal to atrophy being brought about undoubtedly by the disturbances previously mentioned, as all leucocyte manufacturing organs, which are most developed and active during the period of growth, are more liable to hypertrophy on even slight irritation during early years of life. Hill advances the theory "that the adenoid overgrowth is due to the prevention of the normal tonsillar function of leucocyte migration, by diapedesis into the pharynx, by reason of the thickening and impermeability of the mucous covering of the tonsil, induced by contact with irritating contaminations of the nasal secretions." Whether we care to accept this theory or not, a microscopical examination of these overgrowths go to prove that they are not neoplasms, but merely hypertrophies from the mucous aspect of the glands.

MICROSCOPICAL APPEARANCE.

They are composed of lymphoid follicles embedded circumferentially in the retiform adenoid tissue of His, and are bounded apically and laterally by columnar ciliated epithelium; cilia, however, are often absent at points of frequent contact or of friction with the soft palate. The only respect in which these vegetations differ from an enlarged tonsil is that in the latter there is a great amount of connective tissue, due to the irritation produced by the passage of food, etc., whereas the vegetations from their situation are protected from these injurious

influences. Adenoid vegetations of adults contain a considerable quantity of fibrous tissue, having undergone a fibrous change, as it were.

SYMPTOMS.

The symptoms are ones that we would naturally expect from a filling up, more or less completely, of the naso-pharynx. Mouth breathing, with all its attendant evil results; we have respiration, audition, voice production and articulation interfered with, and, aside from these important disturbances, we have a greater evil accompanying them, and one which is attracting the attention of investigators, viz.: their effect on the function of cerebration. Those who have studied the conditions are agreed that the obstruction to respiration, or other mechanical effects of these growths, are utterly inadequate to account for the tremendous disturbances of nutrition, both bodily and mentally, associated with them, and relieved by their removal. Recently Dr. Harrison Allen has called attention particularly to the form of mental impairment and defective intelligence, simulating idiocy, which accompanies even a moderate increase of adenoid tissue in the region alluded to, and advances this hypothesis explanatory of the etiology. He points out the histological resemblance between the lower portion of the pituitary body and the pharyngeal tonsil, both being glandular in character, and shows anatomically a connection by means of a canal, which closes during fetal life, by which the top of the pharynx communicated with the interior of the skull, so that these masses of glandular tissue must have originally formed a portion of the original pharynx. Piersol, in his description of the pituitary body, refers to the anterior lobe as the anterior oral, and tells us that it is entirely distinct from the posterior lobe in structure and in development, since the anterior lobe is derived as a diverticulum from the primitive oral cavity, and, as such, is lined with the oral ectoderm. Dr. Woods Hutchinson, of Buffalo, recently, in an able article on "Acromegaly and Giantism," says: "Not infrequently in early life a fibrous cord runs up through the body of the sphenoid, connecting the two glands, and it is not unreasonable to suppose that structures that were originally continuous may yet retain reflex sympathy with an influence upon each others conditions." To say that such authorities as Dana and Osler have endorsed these statements only serves to increase their value. The results of this reflex, if such exists, are apparent to every neurologist. May it not be manifested in the backwardness and stupidity observed in the majority of children suffering from these conditions? The child has great difficulty in keeping up with his classes in school and is looked upon as being dull, and, as a result, is

held accountable for that which he cannot help. Harrison Allen even goes so far as to venture the opinion that there are many children in homes for the feeble-minded and idiots throughout the land who are victims of this condition, and who, possibly, could be restored to usefulness and to their families by a comparatively trifling operation. Interference with the audition may or may not complicate the case; much depends on the relation of the Eustachian orifice to the vault of the pharynx. If the orifice be situated high up, a comparatively small amount of growth will block it and cause auditory troubles; whereas, if it be low down, there may be extensive vegetations without the Eustachian tube being implicated. If this symptom does present itself, and statistics go to show that it does in the majority of cases, it is the one, as we all know, that first attracts the attention of the parents, and the child is brought to us to be treated for deafness. It may be accompanied or not, as the case may be, with purulent discharge from the ears. At times the child has violent attacks of earache. There is one more symptom or complication that I wish to call your attention to before I leave this part of the subject, and that is the interference these hypertrophies exert in connection with the function of voice production and articulation. The voice has a dead, muffled sound, with a marked nasal twang, and inability to pronounce m, n, and ng.

Brown tells us that "in many cases of deaf mutism these growths are found." Dr. G. Hudson McCuen reports a very striking case of defective speech; the patient was, in fact, almost dumb. It was very near impossible for him to pursue his studies at school, or for his teachers to know what was going on in the child's mind. Adenoids were diagnosed, an operation performed, which resulted in the removal of a large mass of adenoid tissue from the vault of the pharynx. The child was taken into training by his mother under the doctor's direction, with the result that in a short time he was able to read clearly, and answer questions promptly and correctly. And it might be interesting to say here that Lennox Browne, of London, records two cases in which persistent recurrence of laryngeal neoplasms in children had been stopped after recognition and removal of adenoids. He is also responsible for the statement that these growths may be the cause for much infantile laryngitis, to be followed in a certain proportion of cases by the development of neoplastic tissue.

DIAGNOSIS.

The diagnosis, as well as the prognosis of adenoids, we have brought out incidentally in our review of the symptoms and complications, and, further than a mere mention of the two methods employed in the diag-

nosis, we pass to the treatment. The two methods alluded to are, as you all know, posterior rhinoscopy and a digital examination of the naso-pharynx. For the reason that we have to deal with children in the majority of instances the former method is impractical, and we have to resort to the latter as furnishing the only reliable way of ascertaining the existence and extent of the growths. In conducting this examination it is well to always practice two things: First, to protect the metacarpo-phalangeal joint and digit of the index finger by a guard, extemporized or otherwise; and second, practice strict asepsis, particularly if an operation is contemplated. Immediately following the examination scrub the finger thoroughly, and have the nail clean before introducing it up into the naso-pharynx.

TREATMENT.

In regard to the treatment, as previously stated, it is not my intention to give a complete resumé of the methods employed, for each operator has his own favorite method; and each one, undoubtedly, possesses its advantages. I will simply outline briefly the steps in the operation I make, and which has yielded me very satisfactory results, with the hope that you will bring out any modifications or suggestions that you may see fit. That vexed question as to whether an anæsthetic should be given seems to have been about settled by the different authors, they having come to the conclusion that it is best in children to give one. First, because they are unmanageable to a greater or less extent without it, and a more thorough and satisfactory operation can therefore be performed when it is used. Second, the danger attending the giving of an anæsthetic in children is so slight, and complete anæsthesia is never required. In individuals above puberty so many things arise to modify the question that the operator should exercise his own judgment as to whether a complete removal under an anæsthetic or repeated sittings is desirable. Again, the position of the patient during the operation has provoked much discussion, some preferring the sitting, the same as for tonsillotomy; others the recumbent; the latter seems to me to be the most desirable, for as soon as the operation is completed the patient's head is hanging over the table, and the blood is passing through the nose and mouth, thus avoiding all danger from its running down the trachea. When the child is anæsthetized, and the mouth-gag inserted (preferably Denhard's), it is a question of a very few seconds to tear out the larger portion of the growth with the forceps. I use Gradle's model, or Casselberry's. The former, I noted in a recent visit to the nose and throat department of the New York Eye and Ear Infirmary, is the one adopted and highly recommended by such men as Mayer and Asch, and is used exclusively in all their adenectomies. After removing the larger portion of the

growth with the forceps, I follow up with a thorough curetting, using Gottstein's antero-posterior curette. The after-treatment is simple: some efficient and pleasant antiseptic should be used as a gargle and mouth wash, and the patient kept on a liquid diet for a few days.

CONCLUSIONS.

In summing up, let me again repeat the statement made in the outset, that the object of this paper is to impress upon you the importance of this condition by reference to some of its complications, for the fear that our familiarity with the methods adopted for its cure, together with their common occurrence, will cause us to pass it by too lightly. Therefore, in conclusion, allow me to sanction and urge the adoption of a measure suggested by Dr. Hannan W. Loeb, one of the leading specialists of this city, in a recent article on this subject, viz.: That the State should provide for the examination of all school children with a view of correcting this common affection and the symptoms which it occasions; and I would add that the teachers in our public schools be taught to recognize this condition, and be instructed to report all cases of mouth-breathing children to a physician, or board of physicians created for that purpose, for examination.

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 Loeb. "Mouth Breathing Caused by Adenoids, and its Relief."

The Comparative Value of Eucaine and Cocaine as Local Anæsthetics.

Experiments carried out by M. Reclus give the following result:

1. That the injection of cocaine is not at all painful, while that of eucaine causes a certain smarting sensation.
2. Eucaine is a vaso-dilator, while cocaine is a vaso-constrictor. With the former the field of operation is clouded by the blood.
3. Eucaine is certainly an excellent analgetic, although in deep operations the perception of pain seems to be somewhat more distinct than with cocaine.
4. In an operation with cocaine, anæsthesia is still complete an hour and ten minutes after the operation, while with eucaine it disappears after forty-five minutes.

He preferred cocaine, as it presented warning symptoms of intoxication, while eucaine overcame the patient without any premonitory signs.

M. D. L.

EARLY DIAGNOSIS OF EPITHELIOMA OF THE LARYNX, WITH REPORT OF A CASE.*

BY WENDELL C. PHILLIPS, M.D., NEW YORK.

B. S. E., aged 63, a clergyman. Referred to me by Dr. H. D. Zandt, of Jamesburg, N. Y., September, 30, 1896.

History.—Has been a man of vigor and activity, and always able to perform the arduous duties of his calling without disturbance of voice until five months ago. Has never been conscious of marked symptoms of catarrh in any portion of the respiratory tract, and does not take cold easily or frequently.

Four months ago he began to notice a very slight huskiness of voice, which gradually increased up to the time of examination, but it never became severe enough to prevent him preaching three times each Sunday.

At this time his voice was husky, but perfectly audible, and could easily be heard at a distance.

He had no cough, no expectoration, no loss of flesh or appetite, and no pain. Phonation even was unattended by pain. He had recently felt a very slight tenderness, which he located about in the region of the left tonsil. He thought, though he was not sure, that his trouble was located in the left side of his throat. Practically, aside from the mere huskiness of his voice, he was as well as he had ever previously been.

Examination.—Aside from a small ecchondrosis his nasal cavities were in a nearly normal condition.

There was a very moderate amount of inflammation of the post-pharyngeal wall, of a subacute character. The tonsils were quite normal in appearance, very slightly enlarged, and palpation did not show the left to be dense, boggy, or in any way different from the right. A careful examination of the glosso-epiglottic fossa revealed no glandular enlargements or structural changes, and there was no disarrangement of the normal anatomical relations.

The epiglottis was normal, both in appearance and in its mobility.

The arytenoid cartilages were perfectly normal in appearance—no enlargement, no evidences of infiltration or inflammation, and no difference in size or mobility, both doing their work perfectly.

*Read before the New York Academy of Medicine, Section in Laryngology, Jan. 27, 1897.

The vocal cord and ventricular band upon the right side were also normal in every way, mobility and flexibility being not interfered with, and no infiltration.

The left ventricular band was normal, aside from a very slight flush of congestion, but its mobility was not impaired.

Upon the left vocal cord, at about the junction of the middle and posterior thirds, there were three elevated nodules, resting upon a slightly elevated circumscribed base. Altogether there was involvement of less than one-third of the vocal cord. The base was slightly congested, and there was a very small amount of congestion over the near-by area of cord.

Of the three nodular projections, one was upon the upper surface of the cord, the second upon the approximate surface a little posterior, and the third upon the lower border. They were about the color usually seen in papillomatous growths when seen in this location. They were perhaps a little lighter, being a pinkish-white, and they presented a rather smoother surface. There was no secretion.

Careful examination of the neck externally failed to reveal any glandular enlargement. There was no dyspnoea, no dysphagia, no ulceration, no hemorrhage, and no odor to breath.

There was no pain, no cachexia, and no loss of mobility of the articulations or muscles resulting from infiltration. At the time of examination, and even up to within a few days, I was unable to get any family history of malignant disease, he having said that no such disease had existed in his family for two generations. He has recently, however, learned that one sister died at the age of fifty years with cancer of the breast.

Diagnosis.—With the absence of nearly all the early symptoms usually described as attending or complicating epithelioma of the larynx, a diagnosis of papilloma was made, and endo-laryngeal operation advised. Fortunately he was at the same time informed that the microscope might determine it to be more serious, viz.: a malignant, rather than a benign, tumor. After some training and several attempts, the largest nodule was removed with the Shroetter's tube forceps, and was sent to Dr. Jonathan Wright for examination.

He was seen a day or two afterwards, and the surface which had been denuded by removal, instead of showing a tendency to retract and heal, had grown larger and appeared ulcerated; altogether the appearance was such as to create a decided suspicion that the first diagnosis had been wrong, and Dr. Wright's report, which will be given later, was a positive diagnosis of epithelioma.

The patient was immediately fully informed of the nature of his malady, its gravity, and its usual termination. He was also told that on account of its recent origin, and there being so little involvement of adjacent tissue, his was certainly a favorable case for removal by external operation. He readily consented, and was taken to the Post-Graduate Hospital, and laryngectomy was performed by Dr. B. Farquahar Curtis on November 13th, tracheotomy having been performed one week previously.

Under chlorform anesthesia, the entire half of the larynx was removed in the usual manner, and patient was placed in a room at a temperature of 76° F. On the fourth day he had a severe chill, developed pneumonia, and nearly lost his life in consequence, but finally made a good recovery.

The patient is present this evening, and has kindly consented to allow the members of the section to inspect his laryngeal space. It is now over two months since operation, and as yet there are no indications of return. There are also slides from specimens of the growth, both before and after its removal, for microscopical examination. Underneath the epiglottis there are a few hairs, which evidently have sprung from a small portion of skin which became inverted.

The attention of the section is called to this case because they are so rarely seen in the very early stages, and because of the complete absence of the classical early symptoms of epithelioma of the larynx.

Comments.—1st. The apparent incipency of this case, and the absence of all save one of the symptoms mentioned in the text-books as early symptoms, has convinced the writer that epithelioma of the larynx in its very early stages is rarely seen, and if seen is rarely diagnosticated as such.

2nd. When seen at such early stage, error of diagnosis, as in this case, is quite liable to occur, and no positive opinion should be ventured until a portion of the diseased tissue has been removed and subjected to microscopic examination.

3rd. The literature upon laryngeal epithelioma during that stage preceding the symptoms of pain, ulceration and loss of mobility of the affected parts, is extremely meager; and in this case there were absolutely no symptoms except huskiness of voice and a vague, undefined sensation of occasional discomfort in the region of the tonsil.

4th. According to McKenzie's experience (I., p. 335) this would add another to the comparatively few cases of primary epithelioma of the vocal cord; but other observers have reported series of cases which would seem to indicate that the vocal cords are the favorite location. See Hansberg's tables, *Archive für Laryngologie*, Bd. v., p. 4; and

Schrötter's "*Vorlesungen*," p. 329; Schnitzler's "*Atlas der Laryngologie*," pp. 200 and 201.

5th. Ulceration immediately followed the removal of the nodule for examination, giving emphasis to the oft-stated fact that a partial removal by endolaryngeal methods, or any operative interference except extirpation by radical operation, aggravates the disease.

6th. From every standpoint of theory this was a favorable case for external operation and complete removal, viz.: early stage, vigorous constitution, slight involvement of tissue, and absence of so-called early symptoms.

PATHOLOGICAL REPORT.

SPECIMEN FROM B. S. E. CLINICAL DIAGNOSIS BY DR. PHILLIPS: PAPILLOMA.

It consists microscopically of a mass of flat epithelial and epithelioid cells, supported by a moderate amount of lowly-organized stroma. The cells are in places arranged in concentric fashion around small masses of degenerated cells and granular detritus.

There are places where there is simple hyperplasia, with round or ovoid cells.

Diagnosis: Epithelioma.

JONATHAN WRIGHT.

NOTE.—April 23rd. Patient manifests no signs of recurrence. He has a good color, is strong and vigorous, weighs more than before the operation, and says he feels much improved in health. He has considerable voice, of hoarse quality. Although the result seems favorable in this case, should there be a recurrence, it will be reported.

Removal of Foreign Body from the Œsophagus by Forceps, Guided by the Fluoroscope.

The foreign body, an iron washer $\frac{9}{16}$ of an inch in diameter, was swallowed by a male child four years of age (Dr. H. B. Delabour, *Med. Record*, May, 1897). By making the child swallow some water the washer could be located by auscultation about the fourth dorsal vertebra. The fluoroscope clearly revealed the foreign body, and with the aid of a pair of œsophageal forceps, and the administration of chloroform, the obstructing element was successfully removed in twenty minutes.

In order to pass the forceps the head was thrown well backwards so as to bring the mouth on as near a line with the œsophagus as possible. Illustrations accompany the paper.

RETRO-PHARYNGEAL ABSCESS.

BY CARL E. MUNGER, M.D., WATERBURY, CONN.

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This disease, which is known as post-pharyngeal abscess, retro-pharyngeal abscess, phlegmonous pharyngitis,* retro-pharyngeal suppurative lymph-adenitis (Casselberry and Browne), and peri-pharyngeal abscess, is of interest because it is comparatively rare, has a high mortality unless recognized, and is usually susceptible of a cure if it comes under treatment before the patient is quite moribund. As suggested by the above names, this is a disease affecting the lymphatic glands and cellular tissue lying between the mucous membrane of the pharyngeal wall and the anterior surface of the cervical vertebræ. At the beginning of a consideration of this subject, we are confronted with this fact, that while it is a disease which occurs at all ages,† and while the cases as they occur in childhood present a history which is fairly common to all, or we can at least group them into two large classes, the cases occurring in adults are apt to be each *sui generis*, having its own etiology, course and symptoms.

Flint‡ says acute pharyngitis giving rise to inflammation and supuration in the areolar tissue between the mucous membrane of the pharynx and the cerebral column, constitutes the affection called retro-pharyngeal abscess. This statement is true, however, only for the cases occurring in adult life, as in infancy and childhood, periods of life at which a large proportion of these cases occur, there is in this situation a preponderance of lymphatic glands, which are the seat of the affection. This condition of things is insisted upon by Bosworth,§ and as early as 1851 Allen¶ made this statement: "In children, in nearly all these patients the disease is traceable to inflammation, enlargement, and suppuration of the lymphatic glands behind the pharynx or to caries of the vertebræ."

A classification of these abscesses given by Idelson|| in a résumé of a paper written on the subject by Sokoloff, of Moscow, is of interest, being based on forty cases of typical retro-pharyngeal abscess, and

*Bosworth. "Diseases of Nose and Throat," vol. ii., p. 73.

†Flint. "Practice of Medicine," p. 451.

‡Loc. cit.

§N. Y. Journal of Medicine, 1851, p. 307.

¶The Journal of Laryngology, vol. v., p. 206.

||The Journal of Laryngology, vol. v., p. 206.

sixteen of retro-pharyngeal lymph-adenitis, which I will take the liberty of quoting.

He divides these cases into the following groups:

1. Single congestive purulent gatherings in the retro-visceral cervical space, which arise in connection with various inflammatory processes in its vicinity (cervical phlegmon, inflammation of cervical lymphatic glands, periostitis of adjacent bone, parotitis, etc.).

2. Tubercular congestive purulent accumulations developing in connection with cervical spondylitis.

3. Proper retro-pharyngeal abscesses due to inflammatory processes in the space itself. The latter category may be subdivided into three groups: (A) traumatic phlegmon of the retro-pharyngeal cellular tissue, which is caused by a direct inroad thereinto of pathogenic microbes; (B) metastatic inflammation of the tissue, produced by the microbes penetrating through the circulation (in cases of small pox, typhoid fever, scarlatina, etc.); and (C) suppurative retro-pharyngeal lymph-adenitis, which is induced by the microbes traveling along lymphatic vessels (and arrested in the glands), and constitutes the so-called idiopathic retro-pharyngeal abscess of children.

The causes of retro-pharyngeal abscess are (a) predisposing and (b) exciting. The cases may be divided into those occurring in *infancy and childhood* (which may be either acute or chronic), and those occurring in *adult* life, which also may be either acute or chronic.

Of the predisposing causes in the acute cases of infancy and childhood may be noted, heredity scrofulous tendency, syphilis, and the exanthema, the exciting cause exposure to cold and damp air.

In the chronic cases in children we find that a large proportion owe their origin to caries of the cervical vertebræ.

In the adult cases, the predisposing causes are, for the acute cases, about the same as in those occurring among children, with the addition of intemperance.

The exciting causes of acute retro-pharyngeal abscess, as we meet with it in adult life, are numerous and varied: exposure to wet and cold, lodgment of a bone in pharynx, blow with a foil, erysipelas, fall on inferior maxilla, cerebritis, syphilis and mumps; and lastly, there are a number of cases which are called idiopathic.

The symptoms in young children are fever, restlessness, pain on swallowing, and the peculiar voice, which has been called the "*voix de canard*,"* or "*cri de canard*,"† a sound resembling the quack of a duck, and later, dyspnoea; but in certain cases, where the abscess is

*Billiard. "Revue de Laryngologie," Paris, 1894, p. 197.

†Reigenier. "Concours Médecine," 1882, vol. iv., p. 578.

retro-oesophageal, deglutition is performed with comparative ease, the dyspnoea is quite marked, as obtained in cases quoted by Bosworth,^{17*} from cases reported by Ripley, Turner and Chapin, this being explained that the bolus of food pressed the soft sac of pus to one side, while the tracheal wall yielded before the abscess, giving rise to tracheal obstruction.

The symptoms in adults are principally pain, which is constant and continuous, and difficulty in deglutition. There is usually a febrile movement of moderate severity, and that is about all.

The *objective* symptom is, *par excellence*, the bulging post-pharyngeal wall, tense and more or less swollen, and giving a sensation of fluctuation or elasticity, which is not to be met with in the normal throat. In children, the peculiar way in which the head is held has been considered pathognomic, †which is a fixed position, the head being inclined forward and to one or the other side, away from the abscess, if this is unilateral.

As to the course and duration of the disease, it seems to be progressive and not self-limiting; pus has probably been present in many cases for weeks without recognition; indeed, there are recorded cases where the post-mortem alone‡ has revealed the cause of death. There was in the museum of the College of Physicians and Surgeons, N. Y., a pathological specimen described by W. H. Van Buren;§ age of patient six months; abscess not opened; death from exhaustion; the "abscess passed behind the pharynx, enclosed in a dense cyst, lying on the bodies of the cervical vertebrae and in contact with the basilar process." The duration of unrecognized fatal cases has been estimated as from one week to nine months.||

The prognosis is usually grave if the disease is undetected; and the sweeping statement has been made that "acute cases, if not recognized, are fatal."

Retro-pharyngeal abscess may be confounded with croup, œdema, glottidis, aneurism, and tuberculosis of the retro-pharyngeal lymphatic glands.

From croup it is to be differentiated in that the dyspnoea in croup comes on early; the voice is at first hoarse, then weak and whispering; there is a peculiar cough, and the dyspnoea is partially relieved by having the head low; while in retro-pharyngeal abscess the dyspnoea if

**Loc. cit.*

†Albert. "Chirurgie," vol. 1., p. 357.

‡Allen. *N. Y. Journal of Medicine*, 1851.

§*N. Y. Journal of Medicine*, 1850, p. 32.

||Smith. *Loc. cit.*

present comes on late in the disease, and is increased if the head is low, and the voice has the peculiar character referred to.

From œdema of the glottis, in that in this disease the dyspnœa is on inspiration, and the swelling is in front, while in retro-pharyngeal abscess the dyspnœa is continuous and the swelling is posterior.

From the tuberculosis of the retro-pharyngeal glands the abscess is differentiated in that, in the former disease,* (1) there is a simultaneous presence of tuberculous lesions of deep lymphatic glands on the corresponding side of the neck; (2) the affection persists for months; (3) the retro-pharyngeal swelling cannot be reduced in size either by punctures or by incision.

The dangers of this disease, if unrecognized, are: asphyxiation in children, due to the pressure on larynx and trachea, or by a rupture of the abscess and a flooding of the larynx with pus, or gradual loss of strength, or septicæmia.†

Treatment.—This is detection of pus and opening of the abscess. There are two methods: internal incision of the abscess, and reaching the pus from the outside. Each method has its adherents. In a broad way it may be stated that the general surgeon prefers the external method, opening either before or behind the sterno-mastoid muscle, and the laryngologist prefers the internal incision. And again, it may be said that the preference at present is for the internal operation when there is no bulging of the neck laterally, and where there is not present, as a cause, caries or tuberculosis of the cervical vertebræ. As to the dangers of operating, cutting into the internal carotid, as has been done, a sudden rush of pus into the larynx of an already weakened child, and in cases of caries of cervical vertebræ of a sudden dislocation of the cervical spine, and death from pressure on or laceration of the spinal cord. As a matter of surgical historical interest I will mention that laryngotomy‡ has been performed with alleviation of symptoms, but with a speedy return of the same with a fatal termination; in another case tracheotomy§ was performed on an adult, the diagnosis being acute laryngitis; this gave immediate relief, but death ensued on the second day. There was in this case "total inability to swallow."

All this is prefatory to the following case which presents several interesting features:

*Allen. *Loc. cit.*

†*Journal of Laryngology and Rhinology*, vol. vii., p. 206.

‡*Archiv. général de médecine*, tom. lvi., p. 257.

§*Medico-Chirurgical Review*, vol. ii., p. 518.

CASE.—G. P., age 37, male. Previous history: Had measles and scarlet-fever before he was eight years old. At nine years of age he had an attack of acute articular rheumatism, and he has had at least eight different attacks since the first one, this being four years ago. The first attack was complicated with endocarditis, leaving a mitral regurgitant murmur. He had measles the second time at thirteen, and had an attack of pneumonia in 1890. On February 3, 1895, he was taken with a light form of la grippe, accompanied with headache, cough, fever, etc., which cleared up in about seven days. February 17th he was taken with headache and pains in the back of the neck, extending from the seventh cervical vertebra to the base of the skull. He was unable to swallow solid food at this time. The pain in the muscles of the neck continued for three days. The inability to swallow solid food continued, and there had been considerable difficulty in swallowing liquids. The amount of fever had not been excessive at any time, staying at about 100° to 101°.

I found the patient emaciated and weak; he coughed a little, but raised scarcely at all. The voice was strong and clear. He complained bitterly that he could not swallow readily. Examination of the oro-pharynx showed simply a congested mucous membrane. Examination of the laryngo-pharynx showed but little more; the only abnormal configuration of the parts was a too close approximation of the lower posterior pharyngeal wall to the arytenoids, which were slightly swollen and very red. The vocal cords were clear. There was no tenderness in the throat, and there had been no pain in the throat at any time. I was inclined to think that he exaggerated his inability to swallow readily, and said that he would get better. There was at this time no prominence of the pharyngeal wall except that which I have referred to, which was scarcely noticeable, and indeed the picture was that often presented to the observer as the natural configuration.

From this time liquid food could be taken only in small quantities, even this producing a distressing feeling of suffocation, *but without pain*. Dysphagia became more and more marked until March 10th, when he practically could not swallow at all. I again saw the man, and in addition to the subjective symptom of inability to swallow, the following appearance was presented. The patient had a distressed and anxious look, and there was a marked bulging of both sides of the neck, and the thyroid cartilages were protruded so as to be almost in a line with the chin; it looked as though the whole neck with contents had been bodily thrust forward. I again examined the throat, and found that it was almost impossible to see the arytenoid cartilages

on account of an increase of the condition which I had noticed at the preceding examination, but to which I had not given the necessary weight, viz.: the too close approximation of the lower posterior pharyngeal wall to the arytenoids themselves. I then made a digital examination, and thought that I detected more elasticity posteriorly and very low down than would be ordinarily the case. This was not even then marked. I determined that it must be a case of retro-pharyngeal abscess having its origin quite low down. With a laryngeal knife I made an opening in the median line posteriorly about one-half inch above the level of the arytenoids, upon which there was a rush of a large amount of foul-smelling pus. In a short time after this the patient was able to swallow liquids with comparative ease. The depth to which the abscess extended was $3\frac{1}{2}$ inches below the point of opening. The abscess cavity was washed out on the three succeeding days, and I did not see the man again until March 17th. I then found that there was a partial return of the inability to swallow. Examination showed that the wound had practically healed, but there was some bulging below. Another incision was made a little lower than the first one, and there was a daily cleansing of the cavity with injections of hydrogen peroxide for two weeks. It was then treated on every other day until April 13th, the cavity gradually growing smaller. At this time the patient could take a large amount of liquid nourishment, but was unable to take solid food, and indeed he could not until nearly three months after this time.

The points of interest as regards this case are: first, the lack of acute symptoms pointing to the throat, especially the entire absence of pain and tenderness *in the throat*, and secondly, the long period of convalescence, it being over five months from the beginning of the trouble before the patient could be called well.

Foreign Body in the Trachea; Tracheotomy.

The foreign element proved to be a damson-stone (fruit stone), with which a child of three years had played with the day before (John Bark, F.R.C.S., Ed., *The Liverpool Medico Chirurg. Journ.*, Jan., 1897). No cough or spasm appeared until twenty-four hours after the entrance of the body into the larynx. Crampy attacks with struggles for breath then set in. Nothing was detected by laryngoscopic examination. Under chloroform a long tracheotomy was performed, five or six rings being divided. The inferior surface of the vocal cords were touched with a padded probe, which act caused a forcible cough, which expelled the damson-stone through the tracheal opening for some distance. The tracheal wound was sutured, and an uninterrupted recovery followed.

Auscultation at the time gave evidence of some substance rushing up and down the trachea during respiration.

M. D. L.

ADVANCED METHOD IN TEACHING THE DEAF.

BY M. A. GOLDSTEIN, M.D., ST. LOUIS.

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Aurist and Laryngologist to the Terminal Railroad Association, Etc., Etc.

As early in the literature of medicine as our records can be traced, deaf-mutism has been a factor so constantly present that we are fairly warranted in the assumption that it has existed since the beginning of the age of man.

In the works of Hippocrates and Aristotle we find characteristic mention and unique explanations of deaf-mutism. It is interesting to note that Hippocrates assigned as the cause of mutism the inability of the deaf to use their tongue in articulate speech. Aristotle advanced the theory that deafness and mutism always existed conjointly, drawing such inference as the result of his anatomical observations, that some nerve-communication and relationship of the lung to the ear existed in the brain. This explanation of a nerve-communication between the ear and the organs of speech was universally accepted, and prevailed for centuries.

To a Spanish monk, Pedro de Ponce, who lived at the end of the sixteenth century, belongs the honor of first establishing, by practical demonstration, the true status, that mutism is only a secondary factor of deaf-mutism, and that the deaf can be taught to speak; that mutism is independent of the aural lesion, and that there can be deafness without mutism.

Innovations in this field of otology were few in the seventeenth and eighteenth centuries. A step forward was taken in 1778, when the Abbé de l'Epeé in Paris, and Heinecke in Leipzig, founded the first institutions for the instruction of the deaf and dumb. The method of instruction employed at this time was that of sign-language and gestures, scientifically termed dactylology.

Until within the last decade this has been the only mode of instruction for the deaf in England and America.

Heinecke was an advocate of instructing the deaf by lip-reading and articulation, a system which has been extensively cultivated and favored in Germany ever since.

Another variation in teaching-methods was that of Bell's system of visible speech, successfully employed in England since 1869, based on the physiological action and position of the vocal organs during

speech; it is in essence an alphabet of sounds, in which the symbols inform the child how to place its lips, tongue and palate, and thus produce a vocal sound.

The proposition, as herein advocated, to attempt the treatment of deaf-mutism by the influence of sound on the latent or impaired auditory nerve, is by no means new.

In 1743 Bewius recommended sound conduction in the treatment of deafness. Itard and Toynbee report a number of cases successfully treated by similar methods. Phillippe strongly advises the use of an ear-trumpet, still cultivated considerably by French aurists. Browne and Keown have also reported improvements in hearing, the result of stimulating the auditory nerve by sound.

Urbantschitsch has recorded numerous improvements in auditory perception casually observed in the examination of healthy and diseased ears. Eitelberg instituted detailed research in similar cases.

Notwithstanding all these observations, and the thoroughly instructive investigations of Itard and Toynbee, the attempt to adopt a system of treatment to benefit the hearing of the partially or even totally deaf has been sadly neglected, and has gained but little recognition, especially from aurists. Even the celebrated Meniere, one of the most distinguished of French aurists, seems to have added a discouraging opinion, designating the results of the application of "aural exercises," and other methods proposed for the training of deaf mutes, undertaken by the Paris Deaf-Mute Institute, as illusory and transient.

To Urbantschitsch, of Vienna, we must credit the first successful results in the instruction of deaf-mutes by a systematic course of training of the auditory nerve by aid of the human voice. In 1893 Urbantschitsch published his first results on this system of aural practice; one year later the results obtained by this system in a large class of pupils in the Oberdoebbling Institute for the Deaf were submitted to the Otological Society of Vienna.

I had the pleasure of witnessing these demonstrations, and was so impressed with the practical possibilities of this method that, shortly after my return, I published my notes and experiences, with numerous cases, under Professor Urbantschitsch's personal supervision, together with a detailed description of the method.

The manner of conducting this system of "aural practice" is as follows:

We will suppose that the pupil before us is a case of almost complete deafness; a patient who has been examined by competent aurists, and who has been assigned to some institution for the teaching of the deaf and dumb, who hears only the loud clapping of the hands at close

range, or the sound of a loud gong in the same room, but has no appreciable perception of the sounds of the human voice. The pupil is comfortably seated before the instructor, so that the instructor's mouth can be brought in a direct axis with the pupil's ear. We then proceed in a loud voice, and with a prolonged and even tone, to sound the vowel *a*, the vocal sound most plainly and easily heard by the human ear; on inquiry of the pupil we learn that he has received no sound impression whatever, or, at best, a very indefinite sound perception is indicated. This sound perception, if present, may be the same for all vowels, thus, *a*, *e*, *i*, *o*, *u*, would all be heard as *a* or as *o*, as the case may be. The pupil usually has a rather confused idea as to what is expected of him, and it may be expedient to begin the exercise by an explanation, indicating to the pupil that a certain vowel will be sounded in the ear, and directing him to describe to the instructor what impression or sensation he experiences. As soon as the pupil gives evidence that some impression is being made on the ear, we are ready for the next step. This recognition of some sound perception on the part of the pupil may occur during the first sitting or not until five or six weeks of patient training have passed. ¶ We then proceed to the second stage of our exercise, which consists in teaching the pupil the differentiation of elementary sounds. We select for this purpose the two vowel sounds most easily and plainly audible to the human ear, viz.: *a*, as in *father*, and *o* as in *hope*. These are sounded in the ear of the pupil distinctly and consecutively, until a differentiation of the two sounds becomes apparent. It is most interesting to observe how, by several minutes' use of these two vowels, called into the ear in a steady, low voice, the pupil often arrives at a differentiation; perhaps not a distinct differentiation, yet the sounding of *a* produces a different impression from that of *o*. In some cases several minutes suffice to reach such a primary differentiation; in others a number of sittings are required; sometimes patient work of many weeks being necessary before an appreciable progress can be noted. However, I maintain that the end justifies the means, and the results, though sometimes slowly obtained, are lasting ones. Gradually, as expeditiously as each individual case indicates, the other vowels should be brought into use. The plainest, simplest sounds of the vowels should be used, viz.: *a* as in *father*, *o* as in *hope*, *e* as in *eel*, *u* as in *flute*, *i* as in *late*. Following the vowels, the consonants should be combined in monosyllables, as: *lo*, *may*, *do*, *ba*, *he*, etc. Consonants heard with difficulty, and easily confusable, as: *b* and *p*, *t* and *d*, *g* and *k*, etc., should receive extra attention, and be diligently practiced as soon as the pupil has progressed to this stage.

To add interest to these exercises for the patient, it is well to use instead of mere sounds, words of single syllables, as: *ball, pall—to, do—gate, Kate, etc.*

In conducting the exercises, the pupil may at times persist in repeating a wrongly heard sound or word. Under such circumstances I repeat first the *right* and then the *wrong* sound, until the differentiation becomes apparent.

A deaf-mute, who, through this system, hears a word for the first time and repeats it correctly, scarcely comprehends the meaning of the word. Urbantschitsch cites the case of a deaf-mute girl, who, during one of these acoustic practices, was given the word *Anna*, the name of one of her sisters. This word was plainly heard and correctly repeated, yet when the meaning of the word was asked, the patient was unable to associate the idea of her sister's name with the word heard. When the explanation was given, the young girl's surprise was great, and from that moment a rapid improvement was noted, as the patient made every effort to combine the spoken word with the idea implied.

It is recommended that, in this practice *words without meaning* should *also* be used, to determine whether or not the pupil really hears the words used, and is not exercising the power of combination of familiar sounds.

As soon as the progress of each individual case justifies, *whole sentences* should follow the use of *vowels, consonants and words.*

Another step forward is taken by *gradually increasing the hearing distance.* As previously stated, when these exercises are first begun, the pupil hears at closest range, with the mouth of the instructor close to the ear of the pupil. Some enthusiastic critic may remark, upon reflecting on this single data, that the pupil does not *hear* the vowel or word spoken, but rather *feels the breath* of the instructor, made in sounding the word. Such criticism can be refuted as soon as the pupil's hearing distance can be increased beyond the influence of the instructor's breath; or, in the training, a large paper or vulcanite funnel may be employed to overcome this objection. The apex of the funnel can be lightly brought in touch with the meatus of the pupil's ear, and the instructor can then speak through the funnel, thus cancelling all possibilities that the pupil *feels* rather than *hears* the spoken word.

As the pupil becomes accustomed to the practice, the instructor's *lip-movements should no longer be observed*, in order that the results gained may be those of the "aural practice" *exclusively*, without the auxiliary aid of the eye. This factor can easily be eliminated by

blindfolding the eyes of the pupil, or shielding the mouth of the instructor with the hand.

Regarding the length of time of each sitting in this practice, it is important to know that a few minutes often suffice to tire such patient's hearing-power completely, too prolonged a sitting sometimes causing a fatigued condition of the weak auditory nerve similar to nervous asthenopia. I therefore emphatically urge that a limit of time be always observed in carrying out these "aural exercises." At the beginning, sittings of from ten to fifteen minutes suffice; gradually the length of each sitting may be increased to one-half hour and one hour, to suit the requirements of each case. If an exhausted condition of the patient's hearing power is observed, the exercises should be discontinued for a week or two; in short, such an "ear-strain" should be given the same consideration as an eye-strain—*rest*.

The *pitch and intensity of voice* used must be modified to suit the individual case. The use of ear-trumpets to intensify sound should be very limited in carrying out this practice, as a sensitive aural perceptive apparatus may be easily damaged by harsh or sharp sounds.

In some cases, where the hearing condition is very bad and no sensitiveness exists, the ear-trumpet may be cautiously used in this practice with advantage. Generally, however, a long-sounded vowel or word, given in a moderately loud and clear voice, close to the ear of the patient, and in the axis of the auditory canal, with care used in articulating very distinctly, will suffice.

Mr. B. Thornton, master of the vast Institute for the Deaf at Margate, London—to whom I had the pleasure of submitting several practical tests of this method, has called into use the telephone, where, by the use of a modified mouth-piece and receiver, the sound is intensified, and more readily heard by the pupil. Another advantage to be gained herewith is that by the use of a number of receivers, several pupils can obtain instruction at the same time.

Such a system of methodical, regularly conducted "aural exercises," as herein indicated, can be of decided value to seriously affected hearing, by producing: 1. a *differentiation* and *proper perception* of aural impressions; 2, a *stimulation in sound intensity*, with a gradually *increasing acuteness* in aural perception.

The surprising fact that it is possible for an individual, apparently completely deaf, to develop, by systematic training, not only *perception*, but also *differentiation* of sound, is to be considered only from the one standpoint that said individual was not really deaf, but lacked the power of properly interpreting acoustic impressions.

Let me call your attention to the fact that in the reports and sta-

tistics which we read from nearly every institution for the instruction of the deaf, from ten to thirty per cent. of the children possess some degree of hearing. This "remnant" of hearing, be it ever so slight, is capable of cultivation, and much good can be accomplished towards re-establishing the function of a partially degenerate auditory nerve.

Gentlemen, I take pleasure in presenting for your very careful inspection and most exacting criticism, the practical results of two years' experience in developing this system of training the latent or impaired auditory nerve apparatus.

The demonstrations which you witness to-day are the first of their kind to be submitted to a medical assembly in America. I did not feel warranted in presenting such results for the deliberate criticism of the profession, until I was thoroughly satisfied that every detail of the system had been carefully tested. I feel that I can now present a practical issue, which may be of considerable service in the training of the deaf, and the restoration, to a greater or less degree, of the functions of an impaired auditory perception apparatus.

About two years ago I was granted permission by the authorities of the Sisters of St. Joseph School for the Deaf, in this city, to demonstrate and apply this system in connection with the regular training of deaf-mutes adopted in the institution. I visited the school once a week, and instructed each of the pupils at my disposal, individually.

I cannot praise too highly the work of the Sisters who have charge of these deaf classes; it is mainly to their efficient and conscientious co-operation and daily practice that the value of this system has become apparent.

My work has been confined to this institution, being the only available one of its kind in the city. I have had in training a class of girls, ranging in age from 6 to 18 years.

The progress of the two years are indicated in the accompanying tabulated report.

In this series of cases, the diagnostic evidences all point to *nerve-deafness*, some being simple cases of paresis acoustica, and others accompanied by middle ear and post-nasal complications.

For practical demonstration I have selected four of the pupils whose progress has been most satisfactory.

I desire to definitely state here, that before these "aural exercises" were undertaken, the hearing of each and every individual pupil was carefully tested and recorded.

In my present demonstration, I will cite, in brief, the result of such tests, together with the probable etiology of deafness.

HISTORY OF CASE.	HEARING CAPACITY, JUNE, 1895.	HEARING CAPACITY, APRIL, 1897.
Mary F., et. 15 years, born in Penn. No consanguinity of parents; both, poor temperaments. Father's hearing impaired. Older brother and younger sister both deaf-mutes. Congenital deafness.	Tuning fork tests negative. Does not hear loud shouting. Articulates poorly. Speaks in weak, very high-pitched voice. Membrana tympani normal.	Differentiates the vowel sounds, <i>a, o, u</i> , when called into ear at close range in prolonged tones. Voice improved.
Annie F., et. 13 years, born in Texas. Sister of Case 1. More active. Deafness congenital.	Tuning fork tests negative. Hearing for shouting voice at close range, nil. Articulation poor. Membrana tympani normal.	Differentiates <i>a, o, u, e</i> at 4 inches from ear. Articulation and voice improved.
Annie K., et. 16 years. Contracted mumps when 5 years old, and deafness dates from that time; probably the sequel. Otherwise well developed and healthy.	Total deafness; no bone conduction with tuning fork or watch. No voice sounds heard.	Hears <i>a, o, oo, e</i> , with fair ability to differentiate. Range, 1 inch.
Emma H., et. 14 years. Contracted cerebro-spinal meningitis when 18 months old. Deafness followed.	"Total deafness." Tuning fork, watch, voice, Galton whistle, all nihil.	Differentiates all the vowels. Has had several relapses. Voice has acquired more volume.
Mamie H., et. 13 years. History not obtained.	Has vowel hearing, but cannot distinguish pitch.	Left a few weeks after first sitting. Improvement was very marked.
Emma Y., et. 15 years. Lost hearing when 7 years old, as result of la grippe. Family history good.	"Total deafness." Converges fluently by lip reading.	Differentiates <i>a, o, oo, v</i> . Also two and three vowels in close succession, <i>a, e, oo</i> , etc. Hears several numbers, as <i>one, two, four</i> , etc.
Lizzie O., et. 15 years. Cerebro-spinal meningitis when 2 years old, resulting in complete deafness. No deaf relatives; no consanguinity. Has scar over trachea, which is apparently a tractionomy scar. Patient has no recollection of having had diphtheria or throat complications.	All tests negative. Case one of so-called "total deafness." Voice fair; articulation poor.	Differentiates <i>a, o, u</i> , at 6 inches from ear; can also distinguish <i>low</i> from <i>high</i> pitch of loud voice. Articulation improved.
Julia T., et. 13 years. Lost hearing when 4 years old. Cause unknown.	Tests all negative. Voice thin and high-pitched. Hears nothing.	Hears <i>a, o, oo, e</i> . Differentiates vowels at 4 inches; voice stronger.
Ouida E., et. 19 years. No consanguinity of parents. Congenital deafness. Has two brothers deaf-mutes; also deaf-mute relatives on father's side.	Cannot hear voice or other sounds under any circumstances. Hears very loud clapping of hands.	Differentiates vowels quite accurately when called into ear with voice of only moderate intensity.

HISTORY OF CASE.	HEARING CAPACITY, JUNE, 1896.	HEARING CAPACITY, APRIL, 1897.
Nellie S., <i>et. 25 years.</i> Lost hearing when 4 years old, the result of typhoid fever. No family consanguinity; no deaf relatives.	Falls to hear sound of voice under any circumstances. Tuning fork tests nihil.	Hears <i>a, o, oo</i> , and differentiates these sounds in all possible combinations.
Maud H., <i>et. 11 years.</i> Lost hearing 3 years ago. Cause: suppurative otitis media following "grippe."	Hears voice slightly at close range. Is also slightly deaf. All sound impressions apparently alike.	Differentiates <i>a, e, i, o, u</i> , when spoken in ordinary tones, and numbers from 1 to 6. Voice tests at 18 inches.
Sadie T., <i>et. 12 years.</i> Lost hearing when three months old, the result of cerebro-spinal meningitis. Family history good. Has a bright and lively, though nervous temperament. Strumous diathesis.	Hears voice at close range. Sounds heard are confused and indistinct. Adenoid vegetations; hypertrophied rhinitis, drums slightly opaque and retracted.	Differentiates <i>a, e, i, o, u</i> , with ease at 1 foot from ear. Hears <i>short words</i> . Hears numbers 1 to 20. Can determine <i>high and low</i> pitch.
Della C., <i>et. 14 years.</i> Lost hearing totally when 9 years old. Cause unknown. No parental consanguinity; no deaf relatives.	Tuning fork tests nihil. Falls to hear sound of human voice under any circumstances.	Differentiates accurately all the vowels, <i>a, e, i, o, u</i> . Hears numbers 1 to 6. Hears <i>mannu, papa, baby, Della</i> .
Elta M., <i>et. 11 years.</i> Deaf since 3 months old. Cause unknown. No deaf relatives. Has a good voice and articulates well.	Hears but few indistinct sounds. Tuning fork in both air and bone conduction slightly heard (?).	Hears vowels accurately. Hears numbers from 1 to 20. Hears <i>many simple words</i> .
Vera P., <i>et. 11 years.</i> Deaf since earliest infancy. Cause unknown. Bright and active. Hypertrophied tonsils.	Partial word-hearing. Differentiates vowels imperfectly. Hears tuning fork by both air and bone conduction very slightly.	Hears and repeats <i>words</i> in quicker succession and with as much accuracy as pupils with normal hearing. Hears and repeats <i>words of polysyllables</i> and also <i>entire sentences of simple words</i> .
Fannie McP., <i>et. 16 years.</i> Deaf congenital. Has two "congenitally and totally deaf brothers." Some speech impairment due to hypertrophied tonsils, adenoid vegetations, and slight paralysis of uvula.	Tuning fork test—no air conduction. Hears (?) slight bone conduction. C fork, bilateral. All other tests fail. Hears her name, <i>Fannie</i> , when loudly called at 3 feet range; also <i>mannu</i> , <i>mannu</i> . Hears <i>a</i> and <i>o</i> as different sounds.	Carries on a <i>limited conversation at 20 feet</i> without aid of <i>slight apparatus, with speaker's voice in ordinary conversation, pitch</i> . Hears and repeats <i>words, numbers, and polysyllable words</i> without difficulty. Can determine <i>order of letters</i> .

In conclusion, I would say, that the application of this method is neither difficult nor complicated, but it takes into consideration three very important factors, without which success is impossible: patience to a high degree, perseverance, and a strongly developed power of observation on the part of the teacher to utilize every point of vantage to the pupil. Each individual case is a study in itself, and must be treated along its own lines.

Of the ultimate results of the application of this system we can scarcely form a complete estimate, as the range of improvement in many instances has proven almost unlimited.

Even the benefits acquired by *vowel hearing*, in modulating and regulating speech, are all-important. The gradual progression from vowel hearing to consonants, words, and finally the comprehension of entire sentences, is only possible by a diligent application of "aural exercises."

The gratifying results reached while this system is still in its infancy, and in such a comparatively short time, speak for themselves. The introduction of a system which gives promise of so beneficial an aid in training and instructing deaf-mutes, should, I think, be granted a fair and patient trial in every deaf-mute institution, and by every aurist in America.

Every medical man in general, and aurists in particular, should give the system of instruction pursued in our various institutions for the deaf and dumb a careful study, so as to be able to recommend understandingly to the parents and friends of these unfortunate members of society the course of training to be pursued, best calculated to result in greatest advancement.

3702 Olive St.

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A NEW ELECTRIC ILLUMINATOR.

BY S. S. BISHOP, M.D., OF CHICAGO.

For years I have been searching for a light that would meet the exacting requirements of operations on the mastoid process and middle ear. As one of the most important prerequisite conditions of success in these operations is a proper illumination, we are to be congratulated on having acquired the acme of perfection in the improved Nevius electric lamp. It consists of a 16-candle power incandescent lamp surrounded with a highly polished reflector, which is attached by a ball and socket joint to a leather and elastic head-band. This band is held in position by a second one that passes from the lamp-attachment over the head to the occipital portion of the horizontal band.

The original lamp was useful for general operative work, but, as it was fixed so as to project the rays of light downward and in one direction only, at my suggestion a new lamp was made with a ball and socket joint which allows of throwing the light in any desirable direction.



FIGURE 1. The Nevius Electric Lamp.

The lamp is attached to an electric fixture by means of a plug, like an electric fan, and the light is turned on or off by the sliding switch on the horizontal band, seen in the accompanying illustration at the left of the lamp.

I have operated under all sorts of favorable and unfavorable conditions: when the old illuminators have failed me—practically in the dark; by oil lamps; by the ordinary Argand gas-burners with light-condensers; by the Tobold lamp; by sun-light; and by the Welsbach burners, with and without condensers; but nothing has proven as satisfactory in every way as the lamp shown here. With other devices the operator is placed under various disadvantages. The old electric head-lamps were too feeble. The lustrous reflector of this one gives an illumination far exceeding a 16-candle power lamp. In the use of gas or oil lamps there is always the danger of ignition of the fumes of the ether or chloroform and a resulting explosion, which is not amusing. When using this lamp the operator avoids the shining of bright light directly into his own eyes. It provides a very brilliant illumination of the field of operation, and changes the light from one point to another with the movements of the head. One can operate in the darkest room and select the most delicate of his instruments, for wherever he looks everything is rendered plainly visible.

I have performed the Schwartze and the Stacke operations, removed the ossicles, etc., by the use of the Nevius lamp, with the most gratifying results. While the Welsbach burner furnishes a powerful light, it must be reflected into the field by a frontal mirror, and the light will shine more or less into one's eyes; but the worst feature of the latter burner is that it is so delicate and fragile as to crumble and break by a slight jar, or by the explosive effect of the gas when first lighted. I have often found myself deprived of a good light by these slight accidents.

There is a great satisfaction in the possession of an illuminator that meets all the requirements of our most delicate mastoid operations.

Columbus Memorial Building.

Two Cases of Syphilitic Chancres of the Tonsils.

The first case reported by Dr. Arslan was a woman of 30 years, in which the lesion was at first treated as an acute angina, and later as a recurrent tonsillar abscess (*Rev. Hebd. de Laryng.*, Dec. 5, 1896). The tonsil was tumefied, painful, and presented white spots in the neighborhood of the crypts. After excision, a cavity with indurated sides and a deep ulcer was found; afterwards polydenitis. An energetic mercurial treatment was then commenced, which produced rapid improvement, the secondary manifestations afterwards appeared. Cure took place in three months.

The second case was a woman of 23 years. The chancre occupied the inferior portion of the left tonsil, and the diagnosis of this case was relatively easy. The same treatment was followed by rapid cure.

W. S.

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EDITORIAL.

THE ANNUAL MEETINGS OF THE TWO NATIONAL ASSOCIATIONS OF LARYNGOLOGISTS AT WASHINGTON.

The American Laryngological, Rhinological and Otological Society and the American Laryngological Association held their annual meetings at Washington the first week of May. The proceedings of these two societies at the same place, and at about the same time, proved very convenient, as a number of specialists are members of both organizations, and it enabled the members generally to follow the proceedings of both societies.

It was somewhat unfortunate that the Section on Ophthalmology and Otology held its meeting at the same time as the Section on Laryngology. Ophthalmology and Otology are two distinct specialties, and, where the otologist desires to take in another branch, he will select the nose and throat as most intimately associated with the ear, and not the eye. It is therefore to be hoped that the vote of the aurists at the next meeting will be sufficiently strong to dis-associate these two branches; and, if the otologists have not enough members for a distinct organization, they should coalesce with the Section on Laryngology.

While it cannot be said that either of the two meetings have been in any degree an epoch-making one, still many interesting papers were read, and the discussions, on the whole, were interesting.

The American Laryngological, Rhinological and Otological Society especially has our sincere congratulations on the complete success of its meeting. Although practically only the second annual meeting, its proceedings were of such a character that they would be a credit to any society, even of the most mature experience.

Among the subjects that were presented before the meeting of this society that were of special interest was that of Laryngectomy in Malignant Tumors, this subject being brought up by papers read by Drs. Chas. W. Richardson and Frank Hyatt, both of Washington, D.C. The majority of the opinions expressed was that, except in the very early stage of malignant growths in the larynx, the results of radical operations are so discouraging as not to be recommended. A minority opinion, however, held that it were better to take the very small chance of success of a radical operation than to suffer the lingering and painful death from the ordinary course of the disease.

The exhibition of geometric figures produced by the tones of the human voice was given by Dr. H. Holbrook Curtis of New York, and proved very instructive, as also his article on "Singers' Nodules."

The subject of middle-ear disease was discussed at length, the subject being introduced by the papers of Drs. Edward B. Dench of New York and S. MacCuen Smith of Philadelphia.

Malignant Transformation of Papilloma of the Larynx was described by Dr. M. R. Ward of Pittsburg, and the discussion evoked the opinion that, while this transformation is rare, it may undoubtedly occur. A strong argument against this opinion was made, however, as showing that the transformation is only apparent, being due to the difficulty of making a correct histological examination in these cases.

The development of the subject of the X-Rays in Diseases of the Ear, Nose and Throat was described by Dr. W. Scheppegrell of New

Orleans, who also explained his method of treating diseases of the accessory sinuses and ear by ozone gas.

The subject of "Otitic Brain Disease" was introduced by Dr. C. A. Thigpen of Montgomery, Ala., and commanded the earnest attention of the members. His cases illustrated the advantage of operative procedures in cases in which the cranial cavity is involved.

All the subjects were thoroughly discussed, and the four sessions of the Society proved both interesting and instructive.

The election of Dr. W. H. Daly of Pittsburg was unanimously made, and the popularity and reputation of the newly-elected president will, undoubtedly, contribute to further the prosperity of the Society.

The meeting of the American Laryngological Association was somewhat disappointing in some respects. To an association which has among its members many of the most prominent laryngologists in America, and whose age and experience should give it especial advantage, we naturally look for conspicuous results, which can scarcely be said of the meeting which has just been completed. Many of the papers, however, were of considerable interest. Among those may be mentioned that of Dr. J. H. Bryan of Washington, who called attention to the fact that the anterior ethmoidal cells are frequently involved in suppurative inflammation of the frontal sinus, and that the drainage of this cavity should include that of these cells in order to obtain the most satisfactory results.

Dr. Emil Mayer of New York read an interesting paper on "Primary Lupus of the Larynx," and in the discussion he supported his opinion that, while histologically lupus of the larynx may be identical with laryngeal tuberculosis, its course, prognosis and treatment suffice to make it a clinical entity.

Dr. J. Wright introduced a paper on "Bacteria of the Normal Nose and Bactericidal Properties of Nasal Mucus," in which, contrary to the opinion of prominent bacteriologists, he claims that pathogenic microbes may exist in the normal nose, and that the nasal mucus does not possess bactericidal properties. This interesting paper received no discussion.

The general discussion of the meeting was on Atrophic Rhinitis, but did not develop any new facts. Dr. W. E. Casselberry of Chicago described the usual nature and symptoms of the disease, and Dr. J. Nolan Mackenzie of Baltimore, in referring to the pathology of the disease, stated his opinion, supported by microscopic sections, that it was a later stage of hypertrophic rhinitis, as already advocated by Zuckerkandl and others. His argument in explaining the common oc-

currence of this disease in infancy, whereas hypertrophic rhinitis is exceedingly rare, cannot be said to be tenable. No new light was thrown on the treatment of this disease, the argument being in favor of non-irritating antiseptic washes and oleaginous sprays.

A paper was read by Dr. D. Bryson Delavan of New York describing a case in which a number of pathologists had reported sarcoma, which Dr. Eugene Hodenpyl, the well-known pathologist, declared to be non-malignant, an opinion corroborated by subsequent developments, and which saved the patient from the dangers of a radical operation in this region.

Dr. Thos. R. French of Brooklyn was elected president, and his election is a compliment to the high ability and reputation of this well-known laryngologist.

W. SCHEPPEGELL.

A Bean in the Left Bronchus of a Child; The Appreciation of the Clinical Symptoms Furnished by the Foreign Body in the Upper Respiratory Passages.

Dr. Koch reports the following case: A boy of 9 years held a large bean in his mouth; an attack of suffocation suddenly developed, and at the same time the bean disappeared (*Ann. des Mal. de l'Or., du Larynx*, etc., Oct., 1896). The dyspnoea ceased at the end of a few minutes, and the child recovered its usual spirits. On the evening of the following day, however, there was fever and oppression. On the third day after the accident, the left half of the thorax showed a diminished respiratory movement and the absence of the vesicular murmur. In the evening there was a second attack of suffocation, during which the foreign body was heard to strike against the larynx, producing a rustling sound. By placing the finger upon the trachea, the beating produced by the ascending and descending movements of the bean could be felt. On the seventh day the parents decided to permit tracheotomy, by means of which the foreign body was easily obtained. The recovery was prompt.

Contrary to what usually happens, the foreign body had penetrated into the left bronchus instead of the right, which is the larger and more in line with the trachea. The bean appeared a little swollen, but in spite of its having remained for a week in the respiratory passages, it had not altered and had not produced septic infection.

The brilliant result from tracheotomy in this case shows the importance of this operative measure instead of the dangerous method of expectation in the hope that the foreign body will be spontaneously expelled.

W. S.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated meeting, held Wednesday evening, April 28th, 1897. Joseph W. Gleitsmann, M.D., Chairman; T. P. Berens, M.D., Secretary.

PRESENTATION OF CASES.

a. Dr. Wendell C. Phillips presented a

Case of Obscure Laryngeal Disease.

Same case had been presented about one year ago. At that time patient, who was 26 years of age, had complained of hoarseness for ten years, and for a long time had lost voice entirely. There was loss of tissue in the anterior border of the septum, involving the skin, and also of the left ala. There was considerable scar tissue, and the tip of nose was curled under. There was ulceration in left inferior and middle turbinated bones, but no necrosis. The external deformity of his nose from loss of tissue dated back about twenty years. There was much infiltration in larynx upon both sides, involving the true and false cords and inter-arytenoid space, and considerable ulceration of the right side. There was no pain, and general health was good—the patient being a vigorous man, actively engaged in his profession. He gave absolutely no history of syphilis or tuberculosis. Iodide of potassium and mercury had both been tried.

The members of the section examined him, and thought it to be the result of syphilis. One member thought that if the subject was saturated with iodide of potassium and mercury the symptoms would disappear. At present there is the same degree of infiltration to be seen, and also some ulceration of the right vocal cord. Upon the right side of the epiglottis there is a fissure about one-fourth inch deep, which began about the time he was previously exhibited. It has been very slow in growth, and is not in the least painful, even when touched with the probe.

The following note was made July 10, 1896:

“Has taken K. I. up to 60 grains t.i.d., and inunctions of Hg. Two weeks ago discontinued K. I. on account of gastric disturbances. Hg. still used, but with frequent intervals of four or five days.

"Have applied strong sol. of AgNO_3 to ulcerations in nose, and it has gradually subsided and there is less discharge.

"The laryngeal ulceration has subsided considerably. Applied 50-per-cent. ichthyol twice a week. The slight ulceration upon the border of epiglottis has been touched with AgNO_3 , but there is now quite a notch, and it is extending. Infiltration in larynx about same. Voice has returned, so that he can speak in a hoarse tone. Breathes better through nose."

Sept. 23d. "During warm weather the ulceration of larynx has decreased, but infiltration about same. Voice about same. Still hoarse."

During the winter all the symptoms had become worse, notwithstanding the almost continuous use of K. I. and mercury. Since the first of November the voice has been almost entirely lost. There is much infiltration, but ulceration is no worse. Twice recently he has had slight attacks of dyspnoea, due, he thinks, to collections of mucus, but more than likely due to the increasing infiltration.

Discussion.—Dr. J. Solis Cohen of Philadelphia noticed the swelling on the anterior vocal cords. There were also nodules on the base of the tongue, which might be lupus. As lupus is rare, he thought it ought to be scraped and submitted to microscopical examination.

Dr. Newcomb mentioned a similar case that he had met with in his experience, in which the soft palate, uvula, etc., were involved in a disease process which he thought to be lupus; microscopical examination showed that it was not lupus, but later developments proved it to be of specific nature.

Dr. Mayer said that the case presented none of the clinical features of lupus, unless he excepted the slit in the epiglottis, which might point that way. If the microscope showed a very few tubercle bacilli the diagnosis of lupus would be substantiated.

Dr. Gleitsmann asked if a microscopical examination had been made.

Dr. Phillips, in closing the discussion, said he had made no effort to remove pieces of the growth, nor was the sputum examined. The ulceration of the epiglottis was so slow that he could not believe it to be tubercular in origin. The general health of the patient was good, and there were no symptoms of tubercular disease. He thought one year ago and still considered the case to be one of lupus; but the consensus of opinion in the section at that time seemed to be in favor of its specific nature, and so he thought he must be wrong in his opinion.

Iodide of potassium was given in full doses. Mercury was also given, and yet the same condition was present, but there was less

ulceration. There is present a great amount of infiltration, which if it continues to increase will make it necessary to intubate.

b. Dr. Robert C. Myles showed two cases upon which he had operated successfully for

Trouble in the Frontal Sinus, associated with large granulations of the mucous membrane of the nose in the middle meatus, which blocked up the infundibulum.

He operated by Luc's method, making an opening into the frontal sinus above the superciliary ridge. In one of the cases an extremely offensive pus came from the cavity. The patients were shown with the rubber tubes in the sinuses which maintained the opening from the sinus to the nose. The relief in both cases was remarkable.

Discussion.—Dr. Curtis inquired how many cases the speaker had seen. He thought the opening made a rather abnormal one.

Dr. Myles stated that he had opened eleven frontal sinuses externally, and that his cases were those on which operations had been done through the nose without procuring relief. He now has in a rubber tube, which can be seen in the nose. He thinks a silver tube of proper shape, larger than the rubber one shown, might be better.

Dr. Harris had operated on two such cases, but was much pleased with the results. He was much in favor of the method. He used soft tubes, which he thought were in danger of becoming dislodged. To meet the indications one should allow the tube to remain in the abscess cavity to act as a drain.

c. Dr. Berens showed a

Case of Specific Adhesions of the Soft Palate to the posterior wall of the pharynx, with complete occlusion of the right side.

He operated three years before by Nichol's method, which resulted favorably. Before the operation the patient could not breathe through the nostrils at all, but now could do so with perfect ease.

d. Dr. Gleitsmann presented a case that he had operated upon for **Tumor in the Ventricle of Morgagni**, which the members of the section thought to be tuberculous in nature.

The tumor was removed, and the patient got along well. He did not succeed in getting all the tumor out, so he did a secondary operation, using Herzog's horizontal double curette, which the speaker showed.

The tumor was submitted to Dr. Wright for examination, who reported that it was made up of granulation tissue and round cells; there was also coagulation necrosis. The result of examination showed it to contain tubercles, but no bacilli.

EXHIBITION OF APPARATUS.

Dr. J. Solis Cohen, of Philadelphia, showed the section of an artificial saddle, which was to be introduced under the septum of the nose after Roose's operation.

This was a modified saddle, made of platinum, which was perforated.

The nose was to be turned up, and the parts exposed. The saddle was then to be introduced with the prongs fitting in the bone passing under the mucous membrane. It was a very satisfactory instrument. In one patient it not only corrected the deformity, but also cured the catarrh which had troubled the patient for years. It was comfortable, and the patients say it feels as though they had on their glasses; there is usually some anesthesia. There is some contraction of the nasal passages, which require the most constant use of dilators. After operating we must place the saddle in at once, on account of the swelling which follows; if we delayed this condition would interfere with its introduction. Patients are usually perfectly satisfied with the result.

Dr. H. H. Curtis then exhibited instruments for the development of geometrical figures in sand and emery by means of singing the notes of the chromatic scale under stretched membranes, and exhibited photographs of the chromatic scale, with pictures of intermediate tones. These pictures represented the greatest variety of beautiful figures, with a relationship one to another well shown. Dr. Curtis claimed that a singer with tones well placed could produce the pictures at will, and reproduced some of the most intricate by giving the pitch to a boy-soprano and duplicating the photographs on the membranous discs.

These figures were arrived at in attempting to reproduce the flower pictures of Mrs. Watts Hughes, as published in the *Century Magazine* for May, 1891. Originality was claimed only for the determination of the figures which represented each tone and half-tone of the octave; and any note sung in the instrument could be determined at once by reference to the chart of the chromatic scale. By singing a D in the staff, and obtaining the picture on the chart, for example, the singer at once produced the remarkably complicated picture of D in altissimo by singing the octave above. Practical application of the figures the demonstrator hoped to make in ascertaining correct tone-placing in singers, as the tones must be sung with their proper compliment of overtones or harmonies in order to make the nodal lines of the membranes form symmetrical geometric figures. Attention was also called to the influence the nodal lines of the drum membrane of the ear might exert in the appreciation of musical quality of audible tones.

Dr. J. Mount Blyer claimed that he had written an article on tone vibration, and had published pictures of tones and flower forms. This

article he claimed gave him priority. This article appeared in the *New York Medical Record*, September 1st, 1894, with five illustrations.

In concluding, Dr. Curtis said, in reply to Dr. Blyer, that the tone pictures which Dr. Blyer had published in an article on tone vibration, which pictures represented flower and sea-weed forms, were taken without permission from an article in the *Century*, from which magazine he had also plagiarized Mrs. Hughes and one of her critics. From the same source he had also taken two pictures of the serpent and shell forms, published in the *New York World* of April 17th, in which it was announced that Dr. Blyer had produced these pictures on the biograph. Dr. Curtis had investigated at the Biograph Company, and found that Dr. Blyer had no biograph at his office as stated in the article, and had never made use of the machine in his investigations. Dr. Curtis had by permission reproduced Mrs. Hughes flower figures in his book, entitled "Tone Placing and Voice Building" (Appleton, 1896), credit being given Mrs. Hughes and the Century Company. Dr. Curtis also stated that the gentleman mentioned as having assisted Dr. Blyer in the production of voice pictures in both the *New York Journal* and *New York Sun* denied having given him any assistance in that direction, and said he had never seen voice pictures produced by Dr. Blyer, but admitted that he had been asked to assist him in the immediate future.

Dr. J. Solis Cohen, Goodwillie, Mayer, Myles, Quinlan and Gleitsmann entered the discussion.

Influence of Adenoid Vegetations on the Growth and Configuration of the Upper Maxilla and the Nasal Septum, by J. W. Gleitsmann, M.D.

The speaker says that these conditions have not received the attention they deserve in the text-books on laryngology, although some American writers (Delevan) had referred to the relation of a high-arched and deviated septum in mouth-breathers as early as 1887. Gleitsmann relates the history of a girl, seven years of age, from whom he removed adenoid vegetations, and who had a high-arched palate, a V-shaped maxilla, and an irregular position of the teeth.

According to Koerner two different conditions of the maxilla have to be recognized, dependent upon the presence of adenoids before and after second dentition. In the first instance the palate becomes elevated, the alveolar processes approach each other, but the teeth find their normal position. If the adenoids remain after second dentition, the malformation of the upper maxilla becomes more exaggerated, the maxilla assumes the V-shaped form; the teeth, especially the bicuspids, are crowded out of their place, and sometimes protrude in such a manner that they fall short of meeting each other.

This anomaly of the maxilla exerts its influence on the nasal septum, which cannot resist the pressure brought against it and becomes deviated. The reader, therefore, refers to adenoid vegetation as an etiological factor of septal deviations well worthy of consideration.

The malformation of the maxilla with its consequences is explained by the retarded growth of the nasal cavities in post-nasal obstruction, with resulting elevation of the palate. A further element is the elimination of the pressure of the tongue against the cheeks, which in mouth-breathers lies in the lowest maxilla, whilst when the mouth is closed the tongue fills the buccal cavity and exerts a pressure against the lateral part of the maxilla, counteracting that of the cheeks.

Discussion.—Dr. J. Solis Cohen was sorry he was not well posted on the subject. It was true we had vaulted palate with deflected septum; then, too, we often had the same thing without adenoid growths. Deflection of the septum was frequent. Most often a vaulted palate will have deviation of the septum, and at any period of life.

Dr. Goodwillie spoke briefly of the anatomy of the mouth. One should remember that the palate may become vaulted by having an excessive amount of alveolar process.

The speaker then referred to the defects that occurred in intra-uterine development.

He referred to a paper that he read some years ago on "thumb-sucking," in which the mouth was drawn to the opposite side, and held in this position while the child slept.

From first to second dentition the natural process is to throw off teeth. When a tooth first appears and the jaw is closed, the teeth do not fit accurately, and so a deformity may be produced. He then referred briefly to the manner a rhinitis could produce a deformity.

Dr. Mayer spoke of the relation of adenoids and deviation of the septum.

Dr. Myles said that children frequently had deflected septum.

Dr. Quinlan spoke of the point where deflections usually exist, namely, at the satural lines of the plate of the ethmoid with the vomer, the triangular cartilage, the bend taking place at the line of least resistance; frequent traction on the buccinator muscles forces the upper maxilla together, and thereby crowding up the septum, when the foregoing condition is usually apparent. He asked if the thumb-sucking act did not indicate some compensatory demand, viz., in keeping the tongue from the palate dome?

Dr. Gleitsmann, in closing the discussion, said the object of his paper was to draw attention to the relationship between adenoid vegetations and the growth of the maxilla and nasal septum. The first degree of malformation, high-arched palate and deviation of the septum, we see

also in other obstructive lesions of long standing, interfering with nasal respiration. The positive proof that the severer forms—the V-shaped maxilla, with malformation of the teeth—are dependent upon the presence of adenoid vegetations, could only be brought if we would allow the adenoids to remain during and after second dentition, which as an experiment is, of course, inadmissible, but which has been observed to be the case in patients seen by Koerner and others. •

**PROCEEDINGS OF THE AMERICAN LARYNGOLOGICAL
ASSOCIATION AT WASHINGTON, MAY 4, 5, 6, 1897.**

Reported by W. Scheppegegrell, A.M., M.D.

PRESIDENTIAL ADDRESS, DR. CHAS. H. KNIGHT OF NEW YORK.

Dr. Knight called attention to the possibility of infection in the treatment of diseases of the nose and throat, and the necessity of using due precaution in treating specific lesions and other diseases of this character. He referred to the great benefit derived from the principles of Lister, which, while enabling the surgeon to make more conservative operations, formed also the best prevention against contagion.

As regards laryngoscopy, almost all the known functions of the larynx had already been found from sections, before the use of the laryngeal mirror. Laryngoscopy, however, is of inestimable value in enabling us to detect the causes of pathological changes in the larynx.

Dr. Knight suggested the advisability of establishing a journal, not only as the official organ of the Association, but also as a medium of expression of the views and experience of the members of the American Laryngological Association.

The discovery of the X-rays may have an important bearing upon the development of this specialty.

Vivisection has been of undoubted value in the development of our profession, and even the immeasurable benefits of anæsthesia might have been withheld from the human race, had its effects not been first tried on animals. The legal bill, which is now being agitated to prevent vivisection, deserves the condemnation of every true physician. The men who are advocates of the repression of this important method of benefitting mankind little realize that, if prohibition of vivisection becomes a law, the occasion may develop when they may act as a substitute for the worthless animal, upon whom the effects of certain treatment might first have been tried. Many of the advances which have been made in medical sciences have resulted from this method, and the future advances of our profession will depend largely upon exploration on the lower animals.

PAPERS.

Guaiacol as a Local Anæsthetic in Operations of the Upper Air Passages, by Dr. J. E. Newcomb of New York.

Dr. Newcomb stated that while cocaine is an important chemical for local anæsthesia, circumstances may arise in which it is advisable to use another preparation. Eucaïne has certain advantages, but seems not to have come into extensive use. Guaiacol is the active principle of creosote.

The preparation which Dr. Newcomb found the most useful is made as follows: To a given amount of olive oil, add 10 per cent. of dry sulphate of zinc. After heating over a water bath for one hour add 12½ per cent. of absolute alcohol. After shaking several times during 24 hours, it is decanted and 5 per cent. guaiacol added.

He has used this preparation 36 times in the nose, pharynx and larynx, and has usually been able to obtain complete anæsthesia within 10 minutes. In nasal operations no more bleeding followed than when cocaine was used.

Discussion.—Dr. Newcomb does not consider guaiacol superior to cocaine, as it requires a longer time to absorb and is more difficult to prepare, but it is useful in certain cases. Of 98 recorded cases, no bad effects followed. Where cocaine cannot be used, guaiacol forms a reliable substitute.

In reply to a question, Dr. Newcomb stated that, while the penetrating effects of guaiacol are slower than those of cocaine, they are eventually as complete as with the latter.

The General Health of the Upper Respiratory Organs, by Dr. J. C. Mulhall, of St. Louis. Read by title.**Submucous Hemorrhage of the Vocal Cords, by Dr. S. W. Langmaid of Boston.**

Dr. Langmaid reported five cases of submucous hemorrhage of the vocal cords, each resulting from vocal strain. In each case a catarrhal condition of the larynx formed a predisposing factor, and the great strain caused a rupture of the blood vessel. In four of the cases the hemorrhage was on the right side, and one on the left. These cases resulted in a perfect cure and without recurrence. This accident may happen to perfect singers, so that it is not a question of skill, although the inexperienced singer is naturally more liable.

Case one was a young lady of 20 years, of robust constitution, who after singing became instantly aphonic. A laryngoscopic examination showed a small round collection of blood under the mucous membrane of the right vocal cord, and loss of tension. With rest and local treatment the extravasation disappeared.

Case two was that of an actor who had naturally a low voice, and being compelled to speak in a cramped position he became aphonic. The appearance was similar to the last case, and also the treatment.

The third case was also an actor who suffered from the same condition, and in whom the lesion disappeared in 72 hours.

The fourth was that of a school teacher, who suffered from gradual loss of voice and then suddenly became entirely aphonic, and complained of pain in the larynx. The right vocal cord was red from extravasated blood under the mucous membrane. A month's treatment gave good results in this case.

The fifth case was that of a chorus singer, who was desirous of singing in a principle role, who, while suffering from an affected voice, was suddenly called on to take a principal part, this effort resulting in loss of voice. Some weeks later the normal voice was restored.

In none of these cases was there any hæmoptysis, as reported by other observers. While both vocal cords are frequently affected from this accident, in none of these cases was more than one vocal cord affected. All these cases made a complete recovery with simple treatment, with but one exception; in this case a vascular tumor remained, which was surgically removed. The good results were obtained by rest, local treatment and strychnia. Galvanism often proved effective after the extravasation had disappeared.

Discussion.—Dr. J. W. Gleitsmann has seen a severe case due to a blow. There was marked hæmoptysis for four days, after which all symptoms gradually disappeared.

Dr. C. E. Bean reported three cases of recurrent hemorrhage in patients who were not singers, and in which there was no history of vocal strain. The patients had had catarrhal conditions for several years; the cases required considerable time to recover from this condition. There was no hæmoptysis.

In conclusion, Dr. Langmaid called attention to the curious similarity of the cases which he had reported.

Hysterical Dysphagia, by Dr. A. Coolidge, Jr., of Boston.

Hysterical aphonia is always suspected and has its clinical identity, but this is not the case with hysterical dysphagia. Most cases which have been observed have been reported as œsophageal spasms. Mackenzie reports several cases and believes it to be due to a gouty diathesis. Although many cases of hysteria and spasms may be identical, still it must be remembered that the latter may be the primary symptom of a malignant disease. This condition is more frequently met with in women than in men, and it sometimes occurs during pregnancy. There may be pain and a sense of constriction at the cricoid cartilage, and *globus hystericus* may be present. The onset is usually sudden.

The patient may present a weak and anæmic appearance from lack of food. In many cases the difficulty seems to be referred more to the pharynx than to the œsophagus. Recurrence may take place from a renewal of the exciting cause.

In the diagnosis the laryngoscope may exclude pathological lesions. In the treatment, the patient should be assured of relief, and the passage of bougies gives good results. Care should be taken in using electricity in these cases, as death has resulted from irritation of the vagus.

Hysterical dysphagia may result from a mental impression following the irritation due to the swallowing some irritating substance, which, however, has disappeared. This affection may be defined as an inability to swallow without cause, and due to hysteria.

Discussion.—Dr. Thos. Hubbard stated that these cases are difficult of diagnosis; sometimes they are of inflammatory and not of nervous origin. He recalled two cases in which the irritation was due to swallowing potatoes. In one case the patient had been unable to swallow liquids for two days. There seemed to be a constriction at two points of the œsophagus, a sac forming between them from which the liquids were ejected.

Dr. John H. Lowman reported a case in which bougies had been passed without benefit, and in which the symptoms became constantly aggravated. Believing it to be of hysterical origin, he used a spray as a placebo, and told the patient that it would result in a cure. The patient could then swallow without difficulty.

A second case, in which there was difficulty in swallowing and breathing, had been diagnosed as of hysterical origin by a surgeon who had passed a sound, and told the patient to eat. The patient died three or four days later, and it was found that the difficulty was due to an aneurism, and that the surgeon had probably perforated the œsophagus in his efforts to pass the obstruction. He recalled another case in which an aneurism fortunately opened just before the arrival of the surgeon, who had intended to pass an œsophageal sound.

From these cases Dr. Lowman admonishes care in the use of sounds in such conditions. Even the passage of stomach tubes has resulted in death in three cases. In a case coming under his observation, the tube was passed without difficulty, but the patient gradually became weak, and in 20 minutes was dead. Cocaine renders the use of the sound much easier, and it should always be used.

Dr. Gleitsmann referred to a case, which he had already reported, in which there was marked dysphagia. No cause was found except a very large lingual tonsil, which was cauterized, and resulted in a cure of the difficulty of swallowing. The probability is that this was of

hysterical origin, and that the cauterization had cured by the mental impression which was made.

Dr. H. L. Swain stated that he was much interested in the lingual tonsil in connection with such cases. This hypertrophy may cause irritation either directly from its size, or indirectly from the disturbance of the circulation. He has treated a number of cases of dysphagia and irritable cough by applications to the lingual tonsil, which seemed to have caused the trouble.

Dr. Samuel Johnston referred to a case in which the dysphagia was relieved only after an impaction of cerumen had been removed from the ear, and called attention to the necessity of examining the auricular canal in such cases.

Dr. Emil Mayer stated that it is important to make a correct differential diagnosis in these cases. In one case which was reported as hysterical, it was found eventually to be a case of congenital constriction of the œsophagus. This diagnosis was made by means of auscultation. He called attention to the importance of this method, and stated that it should always be practiced before the bougie is used.

Dr. Bryson Delevan stated that he has seen cases which persisted in spite of all efforts, showing that they are due to some neurotic disturbance.

Dr. J. W. Farlow reported a case of dysphagia which persisted for three years, in spite of treatment directed to the faucial and lingual tonsils. There was a painful gland under the angle of the jaw. The removal of an impacted cerumen from the ear gave prompt relief. Many of the cases in his experience were associated with enlargement of the lingual tonsil.

Dr. Langmaid stated that many of these cases are anæmic, the dysphagia being without intermissions, and frequently lasting for years. There seems to be no cause except the anæmia. Some of these cases are simply unable to swallow solids. He has watched such cases for 20 years, and if there had been any malignancy it would have developed. His treatment, besides removing the cause where practicable, is to pass the bougie, using all care and precaution, and each case was benefitted. Whenever the attack recurs, he again passes the bougie, which is sometimes sufficient for a year or two.

Dr. W. H. Daly stated that these cases demand more careful attention than is usually given them. He had an unfortunate experience recently, emphasizing this point. A girl had refused all nourishment but beef tea for some weeks. A careful examination revealed no organic disease. He spoke severely to the patient, in order to cause her to make a mental effort to get well, but the patient seemed very hys-

terical and determined to die. An olive bougie was passed, and he spoke emphatically to the patient and supposed that her sisters, who were present, would recognize the situation. He was called away for two days, and on his return found the patient dead. There was much feeling with the family, showing that his efforts had been misunderstood.

This is a lesson which should teach the necessity of being guarded, and of explaining to the family the object of impressing the patient. The cause of death in this case could not be learned, as the family refused a post mortem.

The best method of treatment is the rest cure, and, if necessary, feeding the patient by a tube. After keeping the patient secluded for three to four weeks, a cure results in nearly all cases.

Dr. A. Coolidge, in closing the discussion, stated that dysphagia is of hysterical origin, not simply where the cause cannot be found, but where it does not exist. Hysterical dysphagia should be recognized as a clinical entity as well as hysterical aphonia. In answer to Dr. Hubbard, he stated that where the lingual tonsil gives rise to irritation it is usually reflex, as there is rarely an actual obstruction. In most cases, the onset of the disease, like the cure, is sudden. He also hesitates to use the bougie in these cases, as there is always a possibility of breaking up a malignant growth and causing hemorrhage. He does not think that the lingual tonsil is as often at fault as would be inferred from the remarks of Dr. Swain.

Where there is an irritable cough, the lingual tonsil should be watched. If the cure results from an application to the lingual tonsil, it is not usually due to a removal of the cause, but simply that something active has been done, and the benefit is through suggestion. He has seen cerumen give rise to a reflex cough, but not to dysphagia. Among exciting causes for dysphagia may be mentioned hydrophobia. Where there is anæmia in cases of dysphagia, it is usually the result and not the cause.

Bacteria of the Normal Nose, and Bactericidal Properties of Nasal Mucus. By Drs. W. H. Park of New York and Jonathan Wright, of Brooklyn.

This paper was read by Dr. Wright, who regretted that the report was not complete, on account of the departure of Dr. Park. He would, therefore, only offer the conclusions at which they had arrived. Ten years ago they had examined 10 healthy cases, and found the nose to contain pathogenic germs. During the past three or four years other pathologists have made similar examinations, and have found the nasal cavity, except the vestibule, not only aseptic, but its

mucus even bactericidal. Where pathogenic germs were found it was supposed to be due to contamination from the vibrissæ.

Drs. Park and Wright again made an examination of 36 normal noses, in which every precaution had been taken to prevent contamination from the vestibule, the vibrissæ having been cut with aseptic scissors, and the vestibule sterilized. The result of this examination proved that the nasal mucus membrane is probably never sterile, only six of the cases having failed to develop pathogenic germs in the culture medium. In many cases few micro-organisms were found, while in others large numbers.

Although the examination had not yet been completed, sufficient was learned to show that the bactericidal properties of the mucus were poor, if not entirely absent. It was found to have no effect on the diphtheria bacillus and on the streptococcus and staphylococcus. On the other hand, the cavity did not contain as many germs as might be supposed. The serum drains downward and washes the cavity, and the cilia also aid in this process. While the mucus is not bactericidal, it does not, however, form a good culture medium. The vibrissæ also assist in protecting the cavity. Two animals were inoculated with a virulent culture in the nose, and died within two to three days.

Remarks on the Treatment of Chronic Affections of the Faucial Tonsils, with Demonstration of Instruments. By Dr. J. W. Gleitsmann, of New York.

Dr. Gleitsmann stated that, with the exception of chronic hypertrophy of the faucial tonsils, there is no condition of such frequent occurrence as chronic inflammation of the crypts. This condition is not observed as often as it should be, this being due to the difficulty of thoroughly examining these parts.

To facilitate this, he prefers a small palate hook to draw the anterior pillar aside. These crypts, in some cases, are filled with a caseous mass containing many leptothrix filaments, and easily develop inflammatory processes. He prefers to tear these diseased crypts open by means of a Moritz Schmidt's hook, either dull or sharpened.

Another frequent association with these cases is a fold of the tonsil which prevents the physician from seeing the posterior surface, which is frequently the most diseased. It is the result of acute follicular inflammation, combined with chronic tonsillitis. The best method of treating these cases is to dissect out the tonsil from its adhesions, and remove the diseased tissue by means of punch forceps.

In the instrument which Dr. Gleitsmann uses the blades are on a horizontal plane, and he has found this the most useful in this class of cases.

Discussion.—Dr. Farlow stated that many persons who write on this subject seem to think that the tonsil should be treated only when it projects beyond the pillars. These cases, however, are not a question of hypertrophy, but of diseased tissue which should be removed. As regards the hook, which Dr. Gleitsmann has shown, he would prefer a stronger and also a longer handle, so that the fingers need not be inserted into the patient's mouth. As regards the punch forceps, he sees no reason why the ordinary forceps with the blades in a perpendicular plane do not answer all purposes, as it is only necessary to turn the hand in order to place them in a horizontal plane. He has used this instrument in 200 cases, and found it sufficient for all purposes. Instead of using a hook to draw the anterior pillar forward, as recommended by Dr. Gleitsmann, he uses simply the tongue depressor, by means of the end of which he can draw the anterior pillar forward, thus performing both acts with one instrument. It is important that a probe should be used in the examination of these cases.

Dr. Daly stated that he did not think that the faucial tonsils are a necessary part of the healthy throat, and if they extended beyond the arches they should be removed. He would call attention to one circumstance, and that is, that the number of instruments are entirely too large. There is rarely an operation of the faucial tonsils which cannot be performed by means of two curved knives, a pair of forceps and scissors. He does not consider these cases as common as would be inferred from Dr. Gleitsmann's paper.

In aggravated cases, the connective tissue is destroyed by pressure, and, as the tonsil has no physiological function, it should be dissected away after the patient has become accustomed to the manipulations.

Dr. Gleitsmann, in concluding the discussion, stated, in reply to Dr. Farlow, that he found the necessity of turning the punch forceps awkward, and therefore he prefers the instrument with the horizontal plane. He also found this instrument useful for the turbinated bone.

In reply to Dr. Daly, he admitted that these operations could be performed with simpler instruments, but by having an instrument especially adapted to the work it facilitates the operation. In conclusion, he insisted that many cases are overlooked, and that great care should be taken in the examination of this region.

EXHIBITION OF INSTRUMENTS.

Dr. Delevan exhibited

New Electrodes for Bipolar and Unipolar Electrolysis.

The bipolar electrode is so made that the distance between the needles may be adjusted to the requirements of the case.

Dr. Farlow exhibited a
Schuetz's Lymphatome,

Which he finds superior, for adenoid operations, to Gottstein's curette in many cases. The instrument cuts backwards, the blade being protected by a rim. Two sizes of this instrument are made. The original instruments are imported from Germany, but they are also made by Codmann & Shurtleff.

Dr. Farlow exhibited some drawings of the larynx which were well prepared, and he also presented some models of the nose and larynx which were useful for instruction. These are made by Betz, of Heilbrun, Germany.

SESSION WEDNESDAY, MAY 5th.

EXHIBITION OF PATIENTS AND SPECIMENS.

Dr. J. H. Bryan, of Washington, exhibited a patient with
Fibrosarcoma of the Nose of four years standing.

The tumor is confined to the nasal cavity and bleeds freely on manipulation. It is increasing in size.

Dr. M. R. Ward, of Pittsburg, called attention to the difficulty of making a diagnosis between **fibroma and fibrosarcoma**. He described a case in which the pathologist reported fibrosarcoma, but in which another pathologist had reported fibroma. There was no recurrence, proving the correctness of the latter report.

Dr. J. E. Boylan, of Cincinnati, stated that he had operated upon a case in which the pathologist reported sarcoma, and in which the patient made a complete recovery. The survival of the patient is, therefore, not necessarily a proof that a growth is not malignant.

Dr. W. E. Casselberry, of Chicago, referred to a case of fibroma of the nose, which he had reported and exhibited on a previous occasion. The tumor was vascular and bled easily. The neoplasm was split and a wire applied, and, in the course of a few weeks, a two ounce bottle of fragments was removed. In sarcoma the growth has a soft aspect, while in fibroma it is more dense. In a case in his practice, the tumor originated from the antrum.

Dr. Wright stated that pure fibroma of the nose is almost unknown, while in the naso-pharynx they are commonly met with.

Dr. Casselberry, in reply, stated that he had had a case of pure fibroma of the nose some years ago. While fibroids of the nose are rare, they do undoubtedly exist.

Dr. Hubbard reported a case of sarcoma, in which an operation was futile, as the middle cerebral fossa was involved. Eye symptoms should be carefully watched in these cases.

Dr. J. Solis-Cohen, of Philadelphia, described a case of sarcoma of the nose and antrum. The tumor was removed through the natural

passages, and the patient lived several years, but eventually died. In malignant cases, more radical measures should be undertaken, as Rouge's operation, with complete extirpation of the diseased area. If such steps are not taken, the patient usually dies in a few months.

Dr. C. C. Rice stated that something must be done in these cases, as their development is very rapid and results in external deformity and destruction of the eye. He referred to a case in which the surgeon had commenced the operation on a man of 25 years, and had ligated the carotid, but desisted because the lymphatic glands were found to be involved.

Another attempt was afterwards made, and the diseased area, including the eye, removed, the patient living several months after the operation. An operation by the snare through the nostril is worse than useless in these cases. A radical operation with thorough removal of the growth and its attachment is demanded. The recurrence in these cases is probable, but it is our duty to give the patient the benefit of the trial.

Dr. Nolan Mackenzie stated that almost all of these cases required radical operations. Instead of Rouge's operation recommended by Dr. Solis-Cohen, he prefers the modified Langenbeck, in which the superior maxilla is rotated out. By this operation he had been enabled to make a radical extirpation of a malignant growth.

"Report of a Case of Suppurative Inflammation of the Frontal, Ethmoidal, and Maxillary Sinuses," by Dr. J. H. Bryan, of Washington, D. C.

There is no disease with such a disposition to chronicity as chronic empyema of the frontal sinus, especially when the ethmoidal cells are involved. These cases were rarely met with formerly, but since the epidemics of influenza, they seem to be of frequent occurrence. The inflammatory process may extend from the nose or from another sinus. It has been shown that sometimes anomalous passages exist connecting the cavities, and the infection may extend along these paths.

The ethmoidal cells are closely related to the frontal sinus, and they are affected, to some extent, in nearly all cases of frontal sinusitis. It has been shown also, in the examination of the frontal sinus, that this cavity varies within large limits. The septum is nearly always present, although occasionally there is a small opening. The size of the cavities cannot be judged by the external conformation, and the superciliary ridge is no guide.

The most successful operation is the external one, using a trephine about three-eighths of an inch in diameter nearly over the supraorbital ridge; the cavity may thus be thoroughly inspected and the diseased tissue removed. Using the little finger as a guide, the naso-frontal

ductus is enlarged, and drainage of the anterior ethmoidal cells established. After removing the diseased tissue within the sinus, a 20 per cent. chloride of zinc solution may be applied. A drainage tube is inserted, and the cavity hermetically closed.

Dr. Bryan described in detail a case which had been operated in this manner, and which had given excellent results. The external wound healed without deformity. The incision is made in a vertical line, and the segment of bone not returned, as the periosteum is sufficient to prevent deformity.

Discussion.—Dr. Casselberry stated that the intranasal treatment in these cases is unsuccessful, as he has found this the case in his own experience. The older operation was unsatisfactory, as it left a scar and usually failed to cure the patient. To be able to assure the patient of a probability of a cure without a scar was a great advantage.

Dr. McKenzie warns against the use of strong antiseptic washes in this cavity, as a bichloride solution of 1 to 10,000 may cause necrosis. If possible, drainage tubes should also be avoided, as they are pus producers and may carry an infection.

Dr. Daly stated that he has never operated by the external method, as the patient usually declined, as no positive results could be promised. He takes issue with Dr. McKenzie in regard to the use of antiseptics. While condemning the use of strong antiseptic solutions, he has frequently used 1 to 3,000 bichloride solution with good effects.

A case in which the lower jaw had been removed, this solution seemed to hasten the reproduction of bone from the periosteum.

Dr. J. E. H. Nichols stated that in a case in which he had performed Luc's operation on the frontal sinus, the case appeared to progress well for several days, when a 1 to 3,000 bichloride solution was used, which produced such a violent inflammation that the sinus had to be reopened and the wound drained externally.

An important point in the differential diagnosis of these cases is, that a long sinewy stream of secretion is indicative of the frontal sinus, while a solid mass suggests antral disease.

Dr. Mackenzie does not disregard the value of antiseptics, but insisted that they should be diluted to such an extent as to be non-irritating.

Dr. Farlow believes that although the antrum is usually secondarily infected, from the frontal sinus by the action of gravity upon the secretions, the reverse may also be the case. This may take place during the recumbent position of the patient.*

*Although gravity may facilitate infection of the antrum of Highmore from the frontal sinus, the reverse could easily take place, even when the patient is in the upright position, by means of capillary attraction, through which the infectious material could easily be drawn into the frontal and ethmoidal sinuses.—*Scheppegrell*.

Dr. Bryan, in concluding the discussion, emphasized the importance of draining the anterior ethmoidal cells in operations upon the frontal sinus. If these cells are involved the result will be unsatisfactory unless they are also drained. He believes the antrum to be more often involved secondarily.

Discussion on the Nature, Symptoms, Pathology and Treatment of Atrophic Rhinitis.

Dr. Casselberry described the nature, symptoms and pathology of atrophic rhinitis. The ozenic form is more common in children, and the dry form in adults. In both the fetid and nonfetid form there is atrophy of the mucous membrane. In some cases the fetid and nonfetid forms blend. The glands are involved in the atrophic process, and the peripheral nerves also, as shown by the decrease of irritability of the mucous membrane in these cases. The bones and cartilages are also involved, and even the external nose is characteristic. Perforation of the cartilage in adults with the dry form is common on account of lack of recuperative power.

In some of these cases there is not only a defective secretion of the mucus, but also of the saliva; which causes considerable inconvenience. Anatomical conditions cannot be viewed as the sole cause. Syphilis may have its influence through heredity. Gout and alcohol are predisposing causes in the simple atrophic form. The simple form may also be a later stage of hypertrophy. Both conditions may coexist and progress at the same time. The middle turbinal may be enlarged and the inferior atrophic. It does not, however, explain the presence of ozena in early life, and hypertrophy does not always end in atrophy.

The theory that atrophic rhinitis results from disease of the accessory sinuses has not been substantiated. The microbic origin is still *sub judice*. This disease is somewhat analogous to rhino-scleroma. Belfanti and other investigators claim cures from the injection of anti-diphtheritic serum on the theory that ozena is due to an attenuated diphtheritic bacillus.

The symptoms are well marked. Whether the fetor is due to decomposition or other causes it is difficult to say. The fetor may be present in the mucus while it is still in the glands; but this is difficult to prove, as the odor, which remains after cleaning the cavity, may be due to secretions in the sinuses. The disease may be due to a neurosis, or may be of microbic origin, with probability in favor of the latter.

Pathology of Atrophic Rhinitis. By J. Nolan Mackenzie, of Baltimore.

Dr. Mackenzie confined his remarks to atrophy of the mucous mem

brane. This is an important structure in an important organ. It contains myriads of vessels and blood spaces in a network of connective tissue. It also contains glands and vascular filaments by which the physiological erection and collapse takes place, which is necessary in carrying out its respiratory function.

In atrophy, there is diminution of the size and disappearance of the individual lungs. In pure atrophy the highly specialized tissue suffers. We may have simple atrophy, or atrophy of degeneration. Simple atrophy may take place from inanition, inactivity, pressure, or trophoneurosis.

In the atrophy under discussion this is not the case. It is the atrophy of degeneration. Thirteen years ago Dr. Mackenzie suggested Sclerosis as a more appropriate name. It means a chronic inflammation in which there is an atrophy of the specialized tissue, with hypertrophy of the connective tissue, and this condition is present in true hypertrophic and atrophic rhinitis. These two differ, not in kind, but in degree. The first is a hypertrophic, and the other an atrophic sclerosis. Chronic inflammation is the chief exciting cause, although there may be an infection through the blood, as in syphilis or tuberculosis.

As regards infection from pus passing over the mucous membrane, there is nothing parallel to this in pathology. The same process involved here is seen in the liver and brain. This change from hypertrophy to atrophy may take place very rapidly, as in the case of a patient seen last December, who applied for hypertrophy, and in whom a month later there were marked intranasal sclerosis.

In reply to Dr. Casselberry that ozena develops too early to result from previous hypertrophy, this may be explained by certain intra-uterine processes which might have preceded it. The future must determine the process by which the hypertrophy passes into an atrophic form. Syphilitic and tubercular taints certainly have their influence.

In the microscope, the hypertrophic and atrophic processes may be seen side by side. This view has been disputed, but unless absolute proof to the contrary can be established it had better be accepted conditionally. When hypertrophy and polypoid degeneration are present in suppuration it is only a coincident.

Treatment of Atrophic Rhinitis. By Drs. C. C. Rice, of New York, and J. C. Mulhall, of St. Louis.

Dr. Rice called attention to the effects of constitutional conditions on this disease, and of the effects of unhealthy occupations. We should, therefore, not neglect to treat the constitutional condition, which may be a predisposing agent. Usually too little attention is given to this point. If limited to one method of treatment, he would

prefer to give the patient out-door work and improve his sanitary surroundings, to the local treatment, except simple cleansing washes. He has had the opportunity of sending eight patients with atrophic rhinitis, who were occupied in shops of various kinds, to a stock farm, and the benefit was noticeable at once.

Alcohol and cigarettes are strong predisposing agents. Where atrophy is present in a man of full habits it is usually attributable to alcohol or tobacco.

The majority of drugs which have been recommended for this disease are stimulating or irritating. The German school, on the theory of the microbic origin of this disease, advises bichloride solutions 1 to 4,000. Electricity has been used in the form of galvanism, faradism and cupric electrolysis. Gottstein recommends the packing of the cavity with absorbent cotton containing some stimulating substance, as iodine thymol, pine oil, etc., in order to obtain the prolonged influence of the drugs.

Vibratory massage is said to have given good results. Destructive applications, such as cauterization, should be censured, as this causes further devitalization. Resorcin ointment is said to have given good results. Peroxide of hydrogen is a useful germicide, but not a good stimulant, and may be irritating if of sufficient strength. Ozone requires a complicated apparatus.

Dr. Rice's personal experience is in favor of oily preparations which are sedative and allay inflammation, and he finds them better than aqueous solutions. The nostrils should be syringed with the smallest amount of water to effect cleanliness. The nasal cup is much better than instruments using pressure. Where there are ulcerations of the mucous membrane, stimulation by friction is the best remedy. After washing, some oily preparation should be sprayed into the nostrils. In children a powder of 70 per cent. compound stearate of zinc in boric acid is useful. While it is difficult to cure this disease, this method alleviates the condition and renders the patient comfortable.

Dr. Knight stated that many of these diseases develop at puberty, or in early childhood. In women it usually terminates at the menopause, and is rarely found after the age of 45 to 50 years. This fact should be considered in the etiology of this disease. In women it seems to exist principally during the reproductive period. When these cases are seen in later life, there is little of the bone or glands left; but there is no crust, and the parts appear moist.

In cases which develop after 20 years, there is usually but little crust. The treatment consists in thorough cleanliness, followed by stimulation, as by thymol.

Dr. D. Bryson Delevan advises stimulation in these cases, galvanism being effective for this purpose. Dr. Stoker, of London, recommends the oxygen treatment in these cases, and claims excellent results. Dr. Delavan is not aware that this method has been attempted in this country, and it would be well to give it a trial.*

Dr. S. O. Van der Poel stated that investigators have reported good results from the use of antidiphtheritic serum in these cases. He recently had an opportunity of testing the value of this treatment. A woman who suffered from typical ozena developed laryngeal diphtheria, and three injections of antitoxin were made. After she recovered from the diphtheria, he examined her several times, and found the nasal disease much improved; the mucous membrane was dry, but not to such an extent as before, and there was no crust.

Dr. J. H. Hartman.—The application of galvanism in these cases is very tedious, but combined with thorough cleanliness it gives better results than with other methods.

Dr. Jas. E. Logan stated that where he finds the atrophic process commences in the middle and not the inferior turbinal, it is usually secondary to empyema of the accessory sinuses.

Dr. Casselberry, in regard to the statement that the atrophic is secondary to the hypertrophic form, stated that this may be accepted in the simple nonfetid form. The argument that the early development of ozena may be secondary to hypertrophy in the intra-uterine state is simply evading the issue.

Regarding the selection of climate, he prefers the moist and Southern climate.

Dr. Mackenzie stated that it is difficult to explain the early development of ozena, but it is probably due to some constitutional taint. The oxygen treatment, like all such agents, is too superficial in its effects.

Dr. Rice, in concluding the discussion, stated that the etiological effect of diseases of the accessory sinuses has not been substantiated. In regard to climate, he prefers the lake shore.†

*As this point was not corrected, it would be well to state that this method has been tried in various parts of America, and it is a well known fact that one of the members of the American Laryngological Association has established a sanitarium in which this form of treatment is carried out on an extensive scale.—SCHEFFEGRELL.

†It is to be regretted that a discussion of this kind is made confusing by including both ozena and simple atrophic rhinitis. The fact that there is atrophy present in both cases is no more reason for combining them than there is for treating pneumonia and pulmonary tuberculosis under the same head, simply because consolidation of more or less pulmonary tissue is characteristic of each.—SCHEFFEGRELL.

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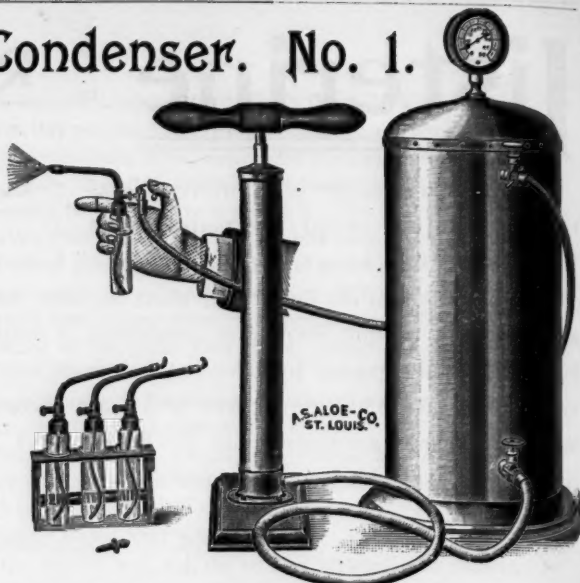
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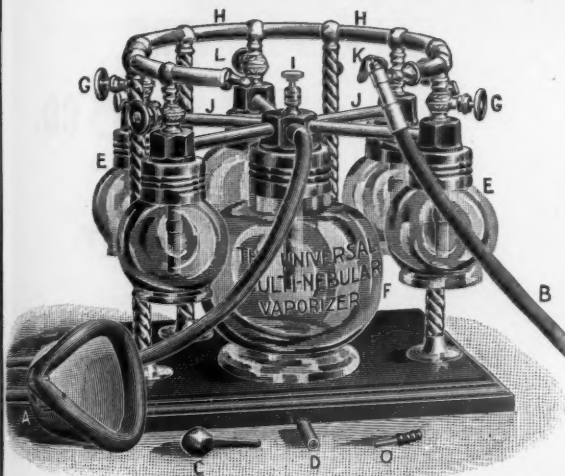
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The Untoward Effect of Substitutes.

A. M. Collins, A.M., M.D., of Shelbyville, Ill., writes under date of November 2nd, 1896: "I never realized the vast difference between genuine antikamnia and the various substitutes that are being palmed off, until within the past few days; and the realization was all the more pronounced because I myself was the patient.

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By DR. RICHARD VOLLERT.

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After what has been set forth here, we can hardly assume that this new product will find any indication for use in ophthalmology.

The advantages of slight dilatation of the pupils and weakening of accommodation might commend its use, applied pure, as anesthetic in certain cases where the eye would be exposed only briefly under one application: but the pain which it causes, compared to the agreeable ischæmia of the eye-ball covering following cocaine, the unpleasant and excessive erythema, and the danger of destructive influence on the epithelium of cornea and conjunctiva, so enormous compared to the effect of cocaine, will prevent the usurpation of the place occupied by cocaine as a tried and cherished friend of the ophthalmologist.

* Original Translation from the Munich *Medizinische Wochenschrift*, June 2, 1896.

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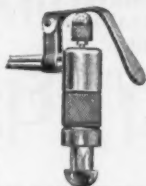
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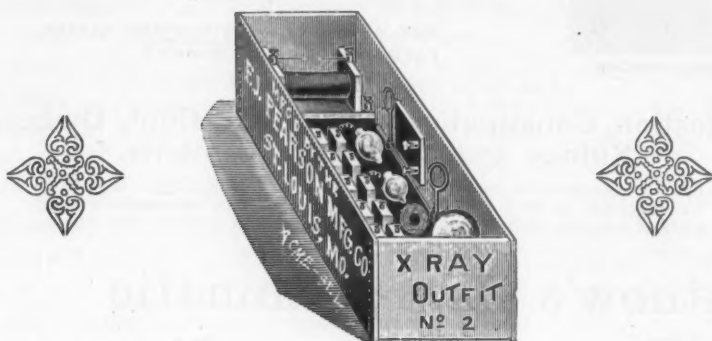
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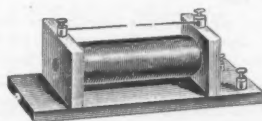
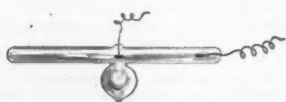
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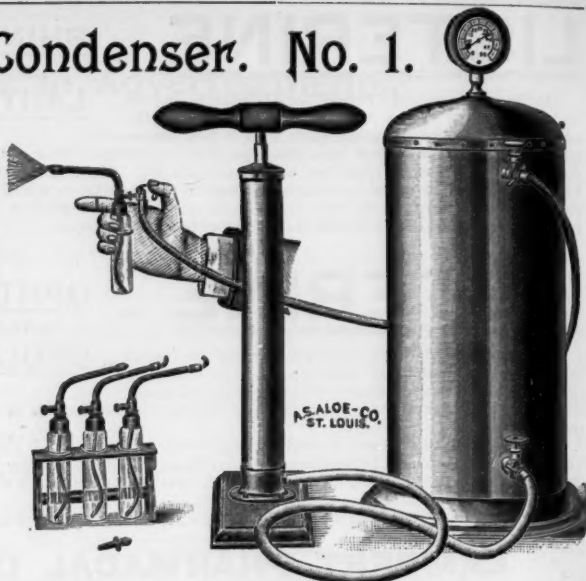
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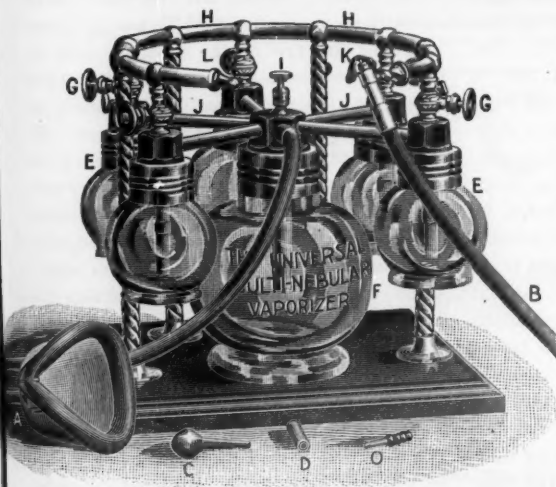
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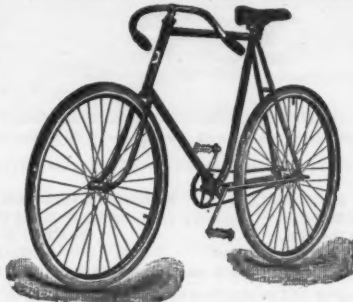
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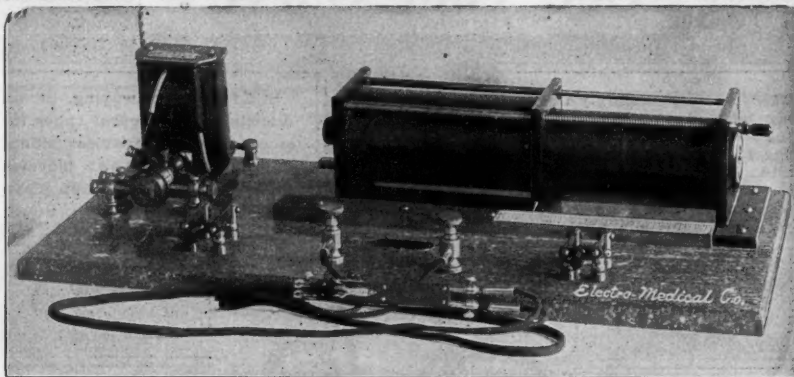
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TWELFTH INTERNATIONAL MEDICAL CONGRESS.

Moscow, 7 (19) 14 (26) August 1897.

SECTION XII b. LARYNGEAL AND NASAL DISEASES.**ORGANIZING COMMITTEE:** *Administrator.*—E. M. Stepanoff, prof. agrégé, Moscow.*Secretary.*—A. F. Belayeff, d-r, Moscow.

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The Organizing Committee of the Section of Laryngeal and Nasal Diseases of the Twelfth International Medical Congress has the honor to invite you to take part personally in its proceedings.

In accordance with § 17 of the Statutes of the Congress the meetings of the Section are to be specially devoted to the hearing and discussion of reports on subjects previously chosen by the Committee. All the time remaining unoccupied is assigned to private papers on subjects chosen according to the discretion of the reporters themselves.

Many well-known specialists, whom the Committee had requested to accept the office of official reporters, have replied so graciously to its invitation that the complete execution of the official programme may be regarded as fully ensured.

The following is the programme of the proceedings of the Section:

1. Suppuration of the Nasal Accessory sinuses (except the maxillary), their diagnosis and treatment (Dr. E. Moure, Bordeaux; Dr. M. Hajek, Vienna).
2. Cancer of the Larynx, its diagnosis and treatment, Prof. O. Chiari, Vienna; Dr. G. Catti, Fiume.
3. The causes and treatment of loss of voice in singers, Prof. H. Krause, Berlin; Dr. M. Lermoyez, Paris.
4. The progress made in the treatment of Laryngeal Tuberculosis since the last International Congress, Dr. Ruault, Paris; Dr. J. W. Gleitsmann, New York.
5. Laryngo-stroboscopy, Prof. Simanowsky, St.-Petersburg.
6. The use of the X-rays in Laryngo-rhinology, Dr. I. Macintyre, Glasgow; Dr. Mount-Bleyer, New York.
7. Oesophagoscopy, Prof. V. Hacker, Innsbruck.
8. The adaptation of Photography to Laryngology, Dr. I. R. French, Brooklyn; Dr. Flatau, Berlin.

Besides the above it is proposed to arrange a joint meeting with the other Sections on the question of Serum treatment of diphtheria.

The Committee ventures to hope that you will consent to communicate the results of your observations and investigations as regards the subjects mentioned above as well as any other subjects pertaining to our special branch.

We beg you to furnish us, not later than the 1st June (No. 8), with the titles of your intended communications, with a detailed résumé of their contents, in order that both may be got out of the printer's hands in good time.

We remain, sir, yours respectfully,

E. STEPANOFF.

A. BELAYEFF.

Von Heyden's

Creosote Carbonate (Creosotal)

most important advance in the treatment of tuberculosis. It possesses all the purely curative effects of beech-wood creosote without any of its caustic properties.

According to Professor Dujardin - Beaumetz, of Paris, the employment of Creosotal constitutes a

This innocuous, odorless, and non-irritant form of gualacol is now regarded as a specific for phthisis and for enteric fever. It acts by steadily and permanently removing from the blood of tubercular and typhoid fever patients the poisonous substances generated by the tubercle and typhoid bacilli.

Guaiacol Carbonate (Duotal)

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most highly as an application for wounds. It should be employed in the form of a powder. In diseases of the skin it may be used as an ointment, whilst an aqueous solution is more appropriate for the disinfection of the hands, the ablation of wound cavities, as a gargle, etc. Credé preferred the more readily soluble LACTATE OF SILVER for hypodermatic injection, and he had used it with excellent results in acute and chronic diseases of the nose, throat, etc. The Chemische Fabrik von Heyden in Radebeul, near Dresden, has the exclusive right to the use of the name of Dr. Credé in connection with these silver salts.

At the twenty-fifth Congress of the German Surgical Society, at Berlin, in May, 1896, Dr. B. Credé, Chief Surgeon to the Carola Hospital in Dresden, recommended von Heyden's CITRATE OF SILVER

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DEFLECTED NASAL SEPTUM.

Dr. H. H. Butts (*N. Y. Med. Jour.*) does not believe that simply because a nasal septum is slightly deflected, or is not symmetrical, it must of necessity be operated upon. It is only when one or more of three conditions are present that surgical interference should be thought of and used. These conditions are as follows:

- I. When the respiratory function of a nasal fossa is seriously impaired or entirely lost.
- II. When drainage of the secretion from the mucous membranes lining the accessory sinuses or nasal fossæ is impeded.
- III. When there is contact of the septum with adjacent structures that can not be overcome by simple methods, such as cauterization, snaring, curetting and trephining with the electro-motor.

A simple enumeration of the symptoms that are produced by the foregoing conditions are as follows: Mouth breathing, caused by occlusion of one or both nasal fossæ. Drainage of the secretions of the accessory sinuses and nasal fossæ into the post-nasal space. Perverted secretion or supersecretion in the nasal cavities. Headache, frontal and occipital. Diseases of the accessory sinuses. Catarrh of the Eustachian tubes. Chronic rhinopharyngitis and laryngitis. Rhinitis vasomotoria periodica. Asthma, reflex. Spasmodic stricture of the œsophagus, reflex. Epilepsy, reflex. Chorea, reflex.

FERRATIN.

Ferratin was introduced by Prof. Schmiedeberg about four years ago. It was the result of scientific investigation, and full details were published in the *Archiv f. experimentelle Pathologie u. Pharmacologie* and in other journals. Comparative and confirmatory investigations were made by Marfori and de Filippi, and all these reports were presented before the International Medical Congress at Rome.

Ferratin was adopted as a therapeutic agent, and is now in general use throughout Europe and in growing demand in the United States. The Committee now revising the Russian Pharmacopœia for a fifth edition has recommended Ferratin for official adoption (see *Chemiker Zeitung*, 31, 1897). Ferratin has been tested physiologically and clinically by acknowledged authorities, and uniformly endorsed. The record is found in the "Medical Annals" of 1894 to 1897, and in recent text-books.

Two attempts to discredit the product were made about two years ago; one by a prejudiced critic, who set up a false standard and demolished it to his own satisfaction, but without impressing others; and another by the originator of a competing therapeutic agent, whose specious arguments were promptly controverted by Prof. Marfori.

Recently an Italian, Cervello, has completed some experiments to show "absorption of iron from the alimentary canal," and an extract has been published in the *University Medical Magazine*, from which other journals will no doubt reprint it. Cervello claims to have demonstrated that "medicinal salts of iron form a soluble compound in the albumen in the intestine," and "the substance thus produced is strictly comparable to Schmiedeberg's and Marfori's ferratin, which is thus unnecessary, since the inorganic salts of iron are converted into it in the intestine."

Does a report ending in such a conclusion, worded to discredit Ferratin, deserve a serious answer? If it were not for the gratuitous and unjustified suggestion, that Ferratin "is thus unnecessary," the report would really be an endorsement of Ferratin.

How long does it take the "medicinal salts of iron" to change into Ferratin in the intestines? Does the transformation proceed under all circumstances? What percentage is finally made available and how much is assimilated? Prof. Marfori has demonstrated (and his results have been verified by equally high authorities) that ferratin contains 7 per cent. of iron, and that an average of 20 per cent. is absorbed. This is definite.

Cervello, moreover, has only re-discovered what Schmiedeberg and others who have made the experiments, long ago stated, viz. (in the words of Prof. G. A. Fackler): "The physiological and therapeutic importance of Ferratin is based upon the fact that, after absorption it is immediately available, while other compounds of iron, including the simple albuminates, must first be changed into Ferratin in order to become active agents."

Not so very long ago, the physician in prescribing for an anemic patient, directed that an iron nail be dropped into a bottle of red wine, and that patient drink a glassful three times a day. We have progressed rapidly and in quick stages since then. Ferratin is the ultimate point of this progress. Shall we now proceed with retrograde steps?

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